October 1931

Drug Markets

Established 1914

The Magazine of the Manufacturing Drug Trade

The Magazine for Manufacturers of Pharmaceuticals, Toilet Preparations, Proprietary Medicines, and Flavors. Of primary interest to executives in direct charge, or supervising purchasing, production, and technical control, and for executives concerned with general administrative problems of the industry.

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- Permissible Heart Medicines 342
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VOL. XXIX

DRUG MARKETS, INC.
PUBLISHERS

NUMBER 4

Publication Office, 28 Renne Ave., Pittsfield, Mass. Editorial and General Office, 101 W. 31st St., N.Y. City

Editor
THOMAS R. FARRELL

Business Manager
FRAZER V. SINCLAIR

PUBLISHED MONTHLY AT PITTSFIELD, MASS., SUBSCRIPTION PRICE, TWO DOLLARS A YEAR, IN ADVANCE, POSTAGE PAID TO ALL COUNTRIES, THREE WEEKS' NOTICE IS REQUIRED TO CHANGE SUBSCRIBER'S ADDRESSES, AND WHEN NOTIFYING KINDLY GIVE BOTH OLD AND NEW ADDRESSES; PRINTED BY THE SUN PRINTING COMPANY, PITTSFIELD, MASS. ENTERED AS SECOND CLASS MATTER, JANUARY 1, 1928 AT THE POST OFFICE. AT PITTSFIELD, MASS., UNDER THE ACT OF MARCH 3, 1879.

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D&O
ESTABLISHED IN 1798

ESSENTIAL OILS
and Kindred Products

ESSENTIAL OILS OF QUALITY

D & O
BRAND

LEMON
ORANGE
LIME

of fine fruity aroma having better keeping quality when exposed to air or subjected to heat.

We also offer our own distillations and productions

Purity guaranteed

Oil Amyris
Oil Cassia Redistilled U S P
Oil Clove U S P
Oil Nutmeg U S P
Oil Patchouly
Oil Sandalwood East Indian U S P
Oil Sassafras Artificial
Anethol N F
Citral from Lemongrass
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Terebene
Etc., Etc.

DODGE AND OLCOTT COMPANY
180 Varick Street New York City

"The integrity of the house is reflected in the quality of its products."
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Buyers' Guide

RAW MATERIALS

ALCOHOLS

A. K. Hamilton
U. S. Industrial Alcohol Co.

AROMATIC CHEMICALS

Dodge & Olcott Company
P. R. Dreyer Inc.
E. I. du Pont de Nemours & Co.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Schering Corporation
Ungerer & Co.
van Ameringen-Haebler, Inc.

BEESWAX

Theodor Leonhard Wax Co., Inc.
Will & Baumer Candle Co., Inc.

BIOLOGICAL CHEMICALS

Wilson Laboratories

BORAX

American Potash & Chemical Corp.
Pacific Coast Borax Co.

COD LIVER OIL

P. R. Dreyer Inc.
Chas. L. Huisking & Co.
Norwegian Cod Liver Oil Association

COLORS

Interstate Color Co., Inc.

CRUDE DRUGS

Bamberger, Bloch & Landesman, Inc
Compagnie Nationale des Aliments Naturels
S. B. Penick & Company
Soc. An. Erboris

DENTIFRICE BASES

Iliff-Bruff Chemical Co.
Industrial Chemical Sales Co., Inc.
John & E. Sturge, Ltd.

ESSENTIAL OILS

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California Fruit Growers Exchange
Dodge & Olcott Company
P. R. Dreyer Inc.
E. I. du Pont de Nemours & Co.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc
Magnus, Mabee & Reynard, Inc.
Plaimar, Ltd.
A. M. Todd Co.
Ungerer & Co.
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W. J. Bush & Co., Inc.
California Fruit Growers Exchange
Dodge & Olcott Company
P. R. Dreyer Inc.
Fritzsche Brothers, Inc.
Magnus, Mabee & Reynard, Inc.
Ungerer & Co.
van Ameringen-Haebler, Inc.

GELATINES

Coignet Gelatines

GLYCERIN

Colgate-Palmolive-Peet Co.
Will & Baumer Candle Co., Inc.

MEDICINAL CHEMICALS

Abbott Laboratories
Benzol Products Co.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Heyden Chemical Corp.
Hoffmann-LaRoche, Inc.
Chas. L. Huisking & Co.
E. C. Klipstein & Sons, Co., Inc.
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Merck & Co., Inc.
Monsanto Chemical Works
N. Y. Quinine & Chemical Works, Inc.
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Schliemann Companies, Inc.

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S. B. Penick & Co.
John Powell & Co., Inc.

VANILLIN

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Givaudan-Delawanna Inc.
Magnus, Mabee & Reynard, Inc.
Monsanto Chemical Works

CONTAINERS

ADHESIVES

Nat'l. Adhesives Corp.

BOTTLES

Owens-Illinois Glass Co.
Swindell Bros.

COLLAPSIBLE TUBES

Art Tube Co.
New England Collapsible Tube Co.
Sun Tube Corp.
White Metal Mfg. Co.
A. H. Wirz, Inc.

PACKING MATERIALS

Kimberly-Clark Corp.

VIALS

Kimble Glass Co.

CLOSURES

CORKS

Armstrong Cork Co.

INSIDE THREAD CAPS

Spring Stopper Co.

LINERS

Armstrong Cork Co.
Bond Mfg. Corp.

METAL CAPS

Aluminum Seal Co.
Anchor Cap & Closure Corp.
Crown Cork & Seal Co.
Ferd. Gutmann & Co.
Phoenix Hermetic Co.

PLASTIC CAPS

Anchor Cap & Closure Corp.
Armstrong Cork Co.
Bakelite Corp.

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FILLING MACHINES

Alsop Engineering Co.
Arthur Colton Co.
The Karl Kiefer Machine Co.
F. J. Stokes Machine Co.
Stokes & Smith Co.

LABELING EQUIPMENT

Economic Machinery Co.
Liquid Carbonic Corp.

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Alsop Engineering Co.
Arthur Colton Co.
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F. J. Stokes Machine Co.

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Package Machinery Co.
Stokes & Smith Co.

PHARMACEUTICAL MACHINERY

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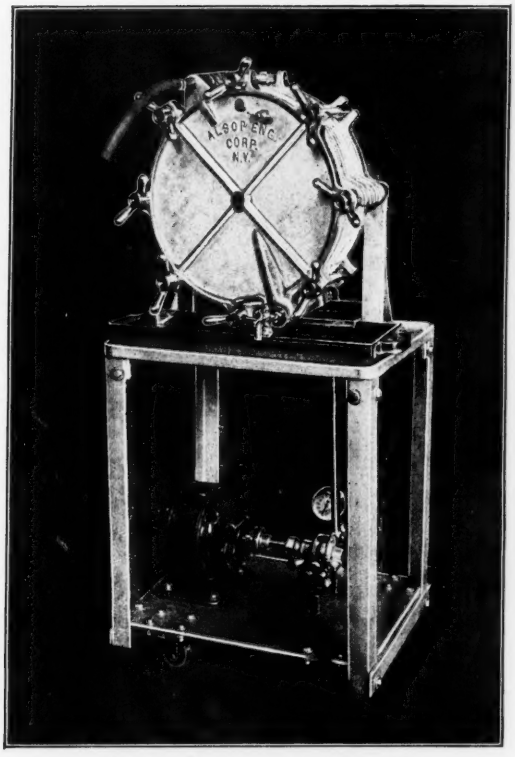
F. J. Stokes Machine Co.

NOW YOU ARE ASSURED OF THESE UNPARALLELED

RESULTS

IN BRILLIANCY AT HIGH SPEED

WITH THE NEW *Hy-Speed* ASBESTOS DISC FILTER



Made in sizes from 2 to 100 discs

IMPORTANT

"Hy-Speed" **Asbestos Filter Discs can be supplied to fit any disc filter. Send for sample discs, specifying exact diameter and type of liquid. Make your own comparison between this and your present filter medium.**

RESULTS NEVER BEFORE thought possible have become a matter of everyday, routine production with this miraculous new *"Hy-Speed"* Filter.

We have PROVED to the manufacturers of hundreds of different liquid products that this new *"Hy-Speed"* engineering feat has established new standards of speed, efficiency, and economy in filtering methods.

We have taken their products . . . and always those of their products which have presented some *difficult filtering problem* . . . and polished them to a degree of CRYSTAL CLEAR BRILLIANCY NEVER BEFORE OBTAINED by any method, fast or slow.

AND we have attained this brilliancy AT GREATLY INCREASED FILTERING SPEED . . . stepping up production to many times the daily capacity of ordinary filters.

We want the opportunity to PROVE THIS TO YOU . . . ON YOUR OWN PRODUCT . . . without cost, obligation or trouble on your part. Send a sample of your product for this test.

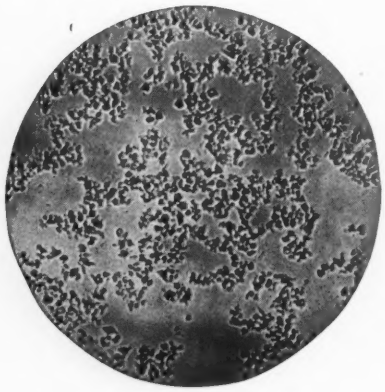
ALSOP ENGINEERING CORP.

Manufacturers of *"Hy-Speed"* Mixers, Filters, Bottle-Fillers, Pumps, Filter Mediums and ALSOP Glass Lined Storage and Mixing Tanks

39 West 60th Street **New York City**

ASK ANY CHEMIST

Making a Well-Known Tooth Paste



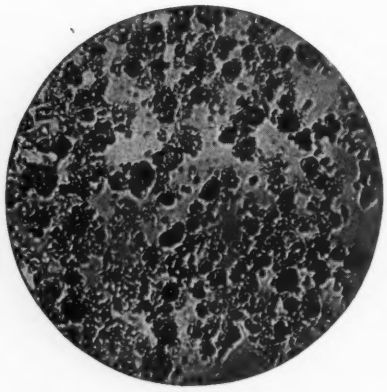
Grade I
Precipitated Chalk x 600

LIGHT precipitated chalk is now generally considered essential as a filling for tooth pastes.

But laboratory control recognizes a vast difference between chalks, each of which may properly be called precipitated chalk.

For instance, during the process of manufacture of Sturge's Chalk the size of the particles being precipitated can be varied in such a way that all grades of density can be produced between the limits of one-sixth to twice as dense as water. The smaller and more regular the particles, the less will be the apparent density of the chalk. In the micro-photographs shown here, the mean diameter of a particle of Grade I is about $^1/_{2000}$ millimetre. This means that 400 particles could pass together through one mesh of a sieve having 250 meshes to the linear inch—one of the finest mesh sieves available in manufacturing practice.

Sturge's Precipitated Chalk is manufactured to a specific density—a standard which always meets the requirements of the tooth paste formula.



Grade V
Precipitated Chalk x 600

Other properties of Sturge's Standard Chalks are:

U. S. P. Always

Sturge's Standard Chalks have always been up to the standard of the U. S. P.

Sturge's Standard Chalks will conform to the most rigid manufacturer's specification.

No Grit

All Sturge's Standard Chalk is free from grit; matter insoluble in Hydrochloric Acid never exceeds 25 parts in 100,000. The solution is bright and colorless.

No Free Alkali

By special methods of manufacture the available alkalinity of Sturge's Standard Chalk is so reduced

WHY STURGE'S STANDARD

Light Precipitated Chalk is Used

that there is no red coloration when dilute phenolphthalein is poured upon the dry powder.

Color Unadulterated

Some manufacturers prefer to add a soluble dye, or even ultramarine in order to give a dead-white appearance. However, inasmuch as this is a form of adulteration, Sturge's Standard Chalk is not treated in any way and exhibits only the natural bright white of the pure Calcium Carbonate.

Free from Metals

Finally, the standard of the U. S. P. is sufficiently severe to condemn all but the slightest traces of metallic impurities, so that the almost entire absence of these in Sturge's Standard Chalks is guaranteed.

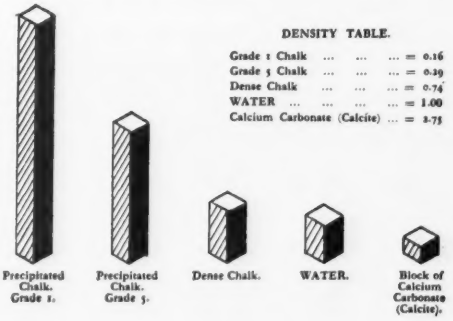
Dense Chalk
Precipitated Chalk x 600

Sturge's Standard Methods of Testing Chalk consist of:

Test A—Density by Dry Way
Test B—Density by Wet Way
Test C—Alkalinity by Dry Way
Test D—Alkalinity by Wet Way
Test E—Standard Test Solution

These tests, perfected and standardized by over fifty years' experience are described in detail in our new book "Precipitated Chalk". This book also contains a series of graphs designed to assist a tooth paste manufacturer in choosing the grade of precipitated chalk which will give him the result he requires. A copy of this book will gladly be mailed on request.

DIAGRAM SHOWING APPARENT VOLUME OF EQUAL WEIGHTS OF MATERIALS.



DENSITY TABLE.

Grade 1 Chalk	= 0.16
Grade 5 Chalk	= 0.29
Dense Chalk	= 0.74
WATER	= 1.00
Calcium Carbonate (Calcite) ...	= 2.75

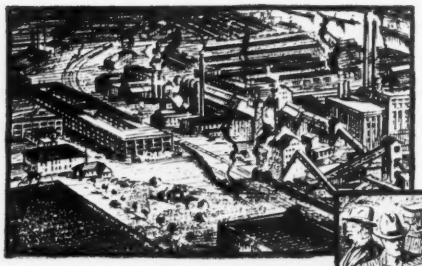
JOHN & E. STURGE, Ltd. **Birmingham, England**

Distributors

271 Madison Ave. **H. J. BAKER & BRO.** **New York, N. Y.**

NATIONWIDE

HORSEPOWER



Eighteen manufacturing plants at strategic points

BRAIN POWER

Engineers, research workers and designers continually striving to improve our containers

MAN POWER

Twenty-nine branch offices . . . a nationwide network of helping hands

at your service at all times

The 18 factories of the Owens-Illinois Glass Company, together with the 29 branch offices and the field personnel of these offices are so knitted as to speed up delivery and maintain the high level of Owens-Illinois service wherever glass containers are used in packaging.

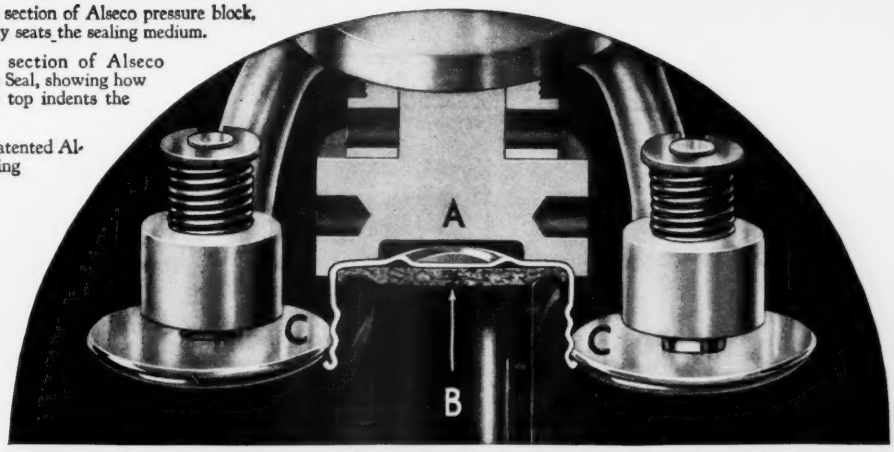
This personnel is in daily touch with every field of endeavor in which glass containers of any kind are used. We want you to feel that these outposts of Owens-Illinois are at your service—not merely as selling organizations but as intelligent advisers and service men on any of your packaging problems.

Through them, you are invited to avail yourself of the service of our New Uses & Research Division or any part of our organization that can be of help to you in making your business more successful or in improving on the usefulness of our glass containers to you.

Owens-Illinois Glass Company, Toledo, O.

OWENS-ILLINOIS

BOTTLES AND GLASS CONTAINERS



(A) Cross section of Alseco pressure block, which fully seats the sealing medium.

(B) Cross section of Alseco Rolled-On Seal, showing how the bottle top indents the liner.

(C) The patented Alseco spinning rollers.

Down comes the patented Alseco pressure block, the top edge of the glass indents the liner—*then all 3 stand stock-still*

This banishes "leakers" and "breathers," for two reasons. *First, every Alseco Seal is seated by stationary top-pressure.* The top edge of the glass indents the liner. Then liner, bottle and pressure block stand stock-still. Imperfections on the sealing surface that would damage the liner if the seal were twisted to a seat, do not damage the liner of Alseco Seals. There is no rotating or twisting in the initial application of Alseco Rolled-On Seals.

Proper seating accomplished, the patented Alseco spinning rollers tailor the skirt of the seal *into the threads* of each individual bottle.

You will see all this when we demonstrate an Alseco machine in your plant. We'll supply Alseco seals and an operator free. Then you can give the Alseco capped containers any tests you choose—shake them, up-end them, put them through any other paces. Not a "leaker" or "breather" will be found. Alseco machines insure a leak-proof seal for every bottle. With slight adjustments Alseco machines will cap tall or short, wide or narrow necked containers, 1 ounce bottles or gallon jugs. Alseco automatic machines cap up to 130 bottles a minute, non-automatic machines as low as 15 a minute. If vacuumizing equipment is desired, this too is available.

(D) The spinning rollers tailor the plain skirt of Alseco Rolled-On Seals into the threads of each bottle.

Alseco Rolled-On Seals made of Alcoa Aluminum provide an initial hermetic seal that can be easily opened and tightly resealed.

(E) With slight adjustments all Alseco Capping Machines will apply Goldy Seals. These seals are especially adapted to tamper-proof vacuum closing single-dose containers. The plain skirt of Goldy Seals is tailored *under the locking ring* of each individual bottle.

Contrast Alseco Seals and Machines with your present or any other capping equipment. Write or send the coupon today for an Alseco demonstration. ALUMINUM SEAL COMPANY; NEW KENSINGTON, PENNSYLVANIA.

ALSECO

Seals and Capping Machines

Alseco Seals and Machines prevent "leakers" and "breathers"...let us prove this to you

ALUMINUM SEAL COMPANY,
New Kensington, Pennsylvania.

I am interested in a demonstration of Alseco Seals and Capping Machines.

Name_____

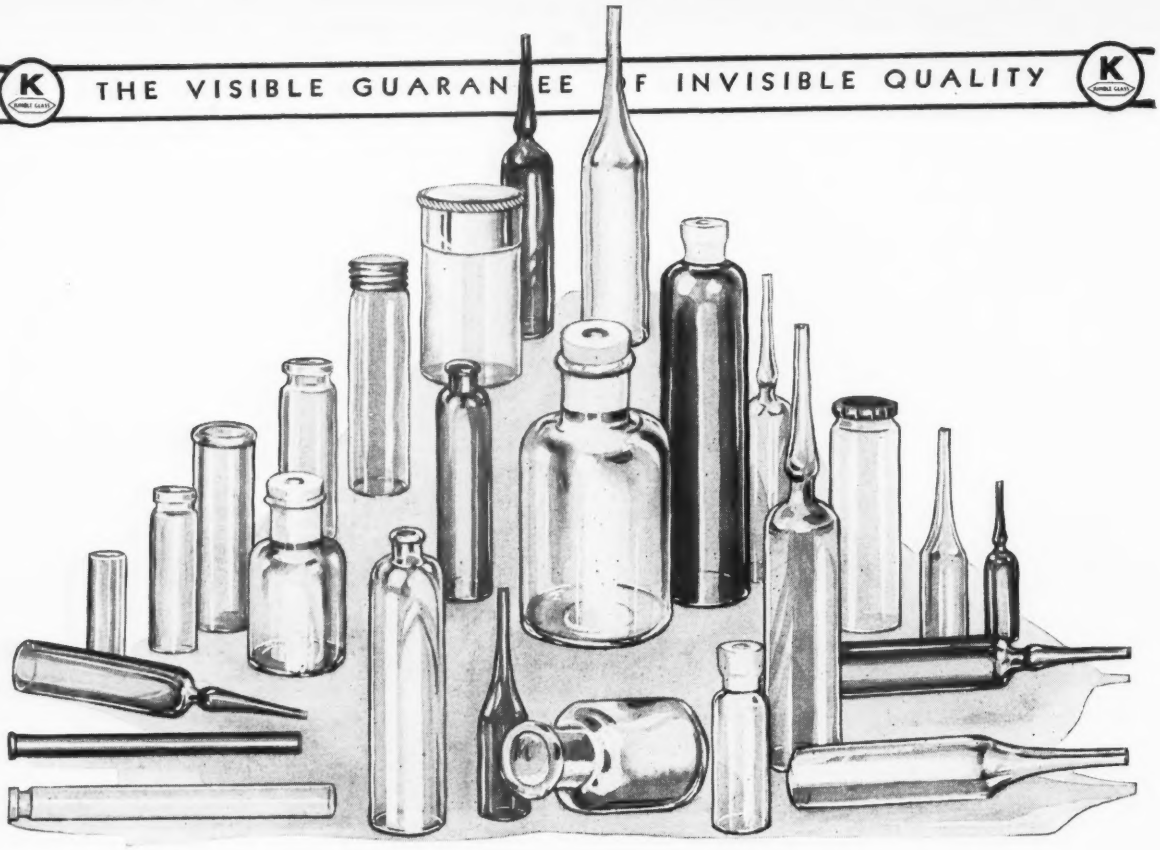
Street and Number_____

City_____ State_____

Name of Company_____

Position_____

THE VISIBLE GUARANTEE OF INVISIBLE QUALITY



THE same painstaking and exacting care exercised by Kimble in the fabrication of glassware for the Chemical, Clinical and Dairy Industries is maintained in the production of Kimble Vials, Ampoules, Serum Bottles and Reagent Containers.

The Drug, Pharmaceutical and Perfume Industries have, to a great extent, standardized and simplified their packaging by the use of Kimble Glassware ... because of its accuracy and reliability, its uniformity and fine appearance, and its ability to serve long and economically.

Advice on packaging and uses for Kimble Drug, Pharmaceutical and Perfumery Containers will be gladly furnished on request. Feel free at all times to consult with us. We want to cooperate.

KIMBLE GLASS COMPANY

Principal Office and Plant, Vineland, N.J.

Branch Offices:

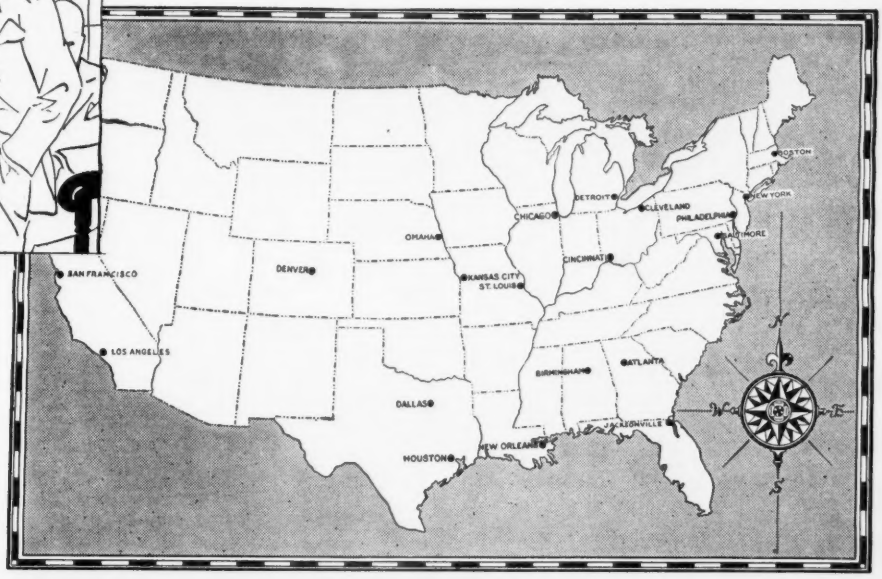
New York, 1440 Broadway — Philadelphia, Public Ledger Bldg. — Boston, 131 State St

Chicago, 402 W. Randolph St. — Detroit, General Motors Bl'g

KIMBLE

EXAX GLASSWARE OF ASSURED ACCURACY NORMAX

When Closures are the Question



Look to

"Sealing Headquarters" for Service

IF your product is packed in glass you can look with confidence to "Sealing Headquarters" to provide you with the right closure. Here is a wealth of practical experience in solving sealing problems, research laboratories that are unsurpassed in their equipment and personnel, a tremendous manufacturing plant (the largest of its kind in the world), a capable art department to create and execute individual designs.

With many types and sizes of closures at our disposal, there is no prejudice or predisposition to influence our recommendations. To aid you in obtaining the *right closure for your product* is our first and only consideration.

There is a C. C. S. office conveniently near you. Whenever the question of closures comes up, phone for the C. C. S. man. That is the quickest and surest way to obtain satisfactory, economical sealing for your product.

Write, wire or phone the office nearest you.

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Cambridge, Mass.

CHICAGO, ILL.
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CINCINNATI, OHIO
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2106 W. Superior Viaduct

DALLAS, TEXAS
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NEW YORK, N. Y.
219 36th St.

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Bush Terminal Bldg. No. 3,

OMAHA, NEB.
16th & Leavenworth Sts.

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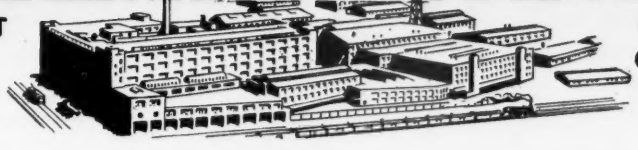
ST. LOUIS, MO.
406 N. Third St.
7211 Delmar Blvd.

SAN FRANCISCO, CAL.
182 Second St.

CROWN CORK & SEAL CO. Baltimore Md.

WORLD'S LARGEST MAKERS OF—



CLOSURES FOR GLASS CONTAINERS

Be it

—a food

—a drug

—a beauty preparation

—or almost any other item, for that matter

there is PROFIT in 10c sizes

The principal benefits resulting from the introduction of 10c packages are:

1. **The creation of a new market and new friends for the product**
2. **The appeal to a powerful consumer buying habit**
3. **New retail distribution outlets**
4. **An efficient method of sampling**
5. **A stimulant to sales of larger sizes**
6. **An outlet for surplus or slow moving stocks**
7. **Increased sales volume, reduction in overhead costs, added profits.**

It is obviously ridiculous to say that every manufacturer or packer could profitably market a 10c line. But many of the fears and misgivings that formerly held them back have been exploded.

For instance, instead of these items having an adverse effect on the regular line, exactly the opposite has been the rule. The 10c items have proved a means of securing additional users, an effective sampling medium, have broadened the market—resulting in an actual increase in the demand for the regular, more economical, sizes.

Certainly there are factors and costs to be taken into account. 10c items are not "put across" automatically. It takes time and effort.

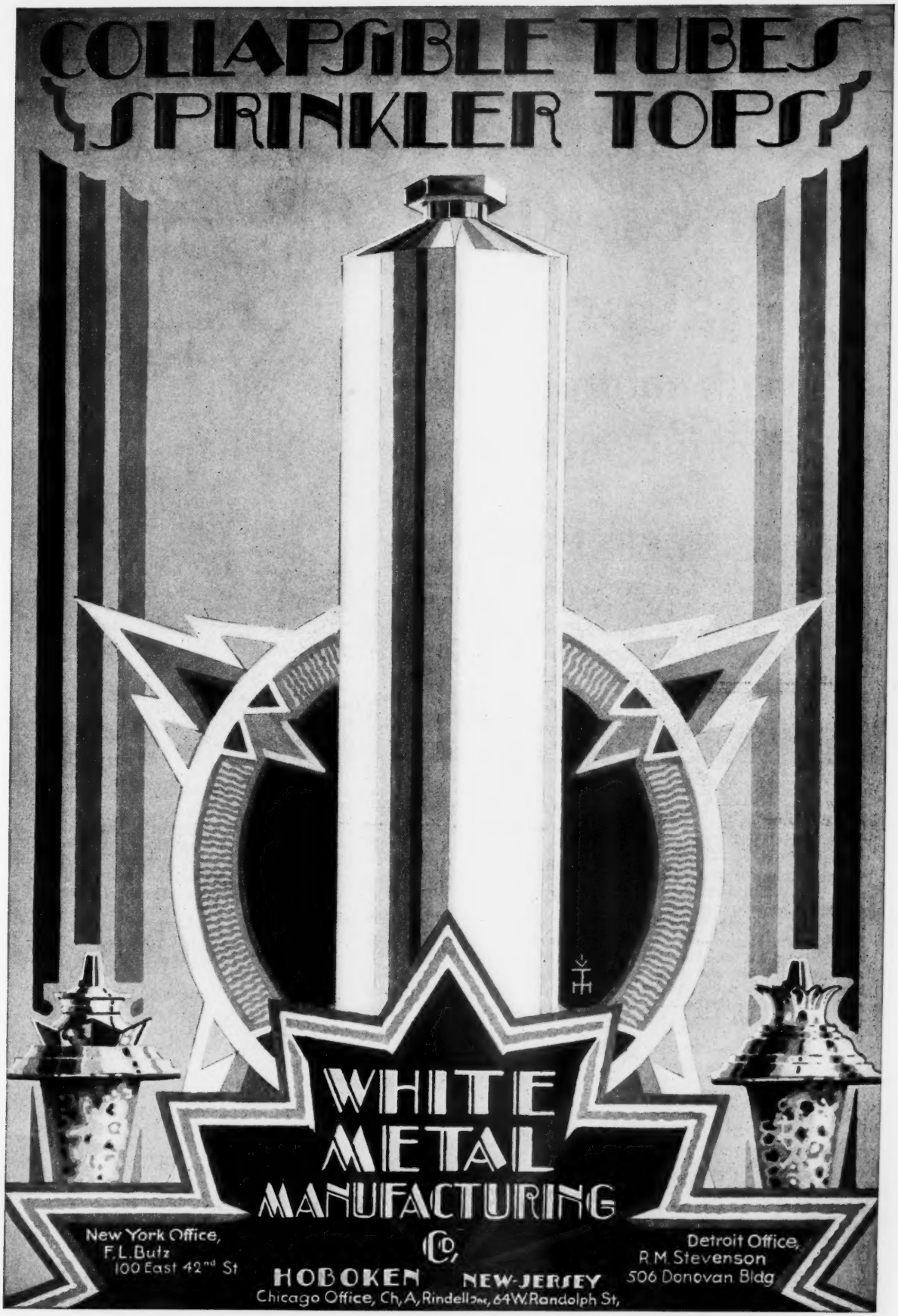
But first and foremost to be considered are the probable and possible benefits (listed to the left). These are proving important enough and profitable enough with a rapidly increasing number of products, to have thoroughly justified their introduction in 10c sizes.

We have prepared a folder discussing this question in detail. It not only takes up the advantages and benefits but points out some of the things to guard against. Just ask us to mail you a copy. And later on Anchor will be glad to work with you in developing an appropriate and sales effective 10c package.

Anchor Cap & Closure Corporation

Long Island City, N. Y. *Branches in all principal cities* **Toronto, Canada**

Anchor CONSUMER-APPROVED CLOSURES for every Packing Need


COLLAPSIBLE TUBES
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WHITE
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CO.
HOBOKEN NEW-JERSEY
New York Office,
F. L. Butz
100 East 42nd St
Detroit Office,
R. M. Stevenson
506 Donovan Bldg
Chicago Office, Ch. A. Rindell Inc, 64 W. Randolph St,

How Parke, Davis & Co. saves 40% in labor cost *with improved packing method*

Rolling a bottle in Kimpak Crepe Wadding. The girls work at conveyor tables where the bottles are individually wrapped, packaged and placed in cartons for shipment to Parke, Davis & Co. customers.

(Excerpts quoted by permission from an article, "Handling Pharmaceuticals Mechanically in the Parke, Davis & Co. Plant," by D. G. Baird, in the March issue of Materials, Handling and Distribution.)

"A MAJOR volume of the preparations is in glass and all, of course, must be carefully packed. Shavings, corrugated paper board and crepe wadding are the materials principally used. Mr. Bostock pointed out numerous advantages of the last-named material and said that if they had to buy shavings (which they don't, because they get them from the box factory), they would probably use it where they now use shavings.

"As it is, the Detroit plant uses this wadding principally in sampling the medical profession. Parke-Davis . . . when it develops a new product, sends a sample to 135,000 or so doctors. . . . Several such mailings are made each year.

"These samples ... are just rolled in a sheet of wadding, which comes cut to size, and are slipped into a cylindrical carton, or, if several are to be shipped at once, laid in a rectangular cardboard box.

"This has reduced the labor cost perhaps as much as 40 per cent, Mr. Bostock said.

"Other advantages are that the material is white and hence suggestive of cleanliness; it is hygienic, absorbent and an insulator. If a bottle of liquid is broken, the material absorbs it and so protects other goods. Because of its insulating properties, it is also used in packing biological products which are shipped in packages weighing as much as 40 pounds.

"The fourteen Parke-Davis branches use this packing material in their regular parcel post shipments to the trade."

Whatever YOUR product may be, and of whatever material made, it will pay you to investigate the numerous advantages of Kimpak Crepe Wadding. Tell us what your product is (if possible send a sample) and we will forward samples and costs without obligation.

Kimpak comes in rolls, sheets or pads of various thicknesses, plain or paper-packed, according to your requirements.

DM10

MAIL THIS COUPON—attached to your letterhead

Kimberly-Clark Corporation, Mfrs., Neenah, Wis.

Address nearest sales office at
8 South Michigan Ave., Chicago
122 E. 42nd St., New York City

Our product is.....
Sample is going to you by mail. Please send samples of Kimpak and costs.

Company.....

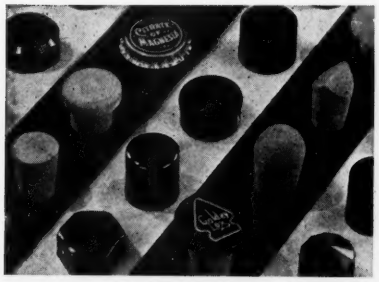
Attention of.....

Address.....

Kimpak
REG. U.S. PAT. OFF. & FOREIGN COUNTRIES
CREPE WADDING

Going to have A NEW PACKAGE?

Seal it with the right Armstrong Closure



ARE you looking for distinction and beauty in your new closure? Consider the infinite variety of harmonious designs and colors possible with Armstrong's Artmold Caps shown above.

The smart appearance of your bottle can be matched with an Artmold Cap molded in your own style or selected from standard stock designs. The low cost will surprise you.

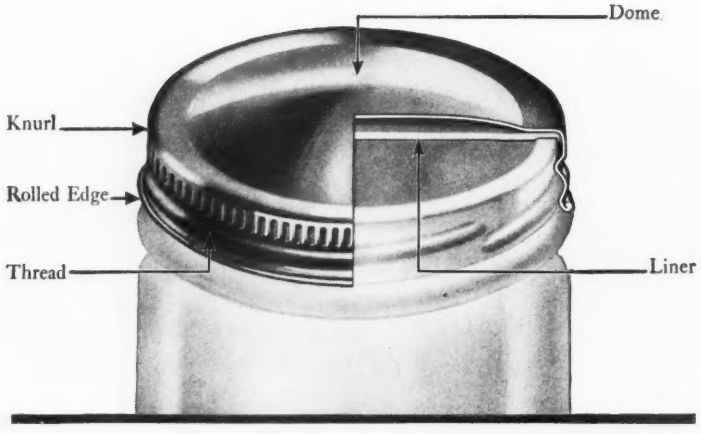
That's *one* Armstrong Closure. There are many others. Whatever your type of bottle, whatever your sealing problem, Armstrong makes the proper closure. Embossed Top Corks, corks of standard or special shape, liners, daubers, applicators, crowns, cellulose caps—Armstrong has them all.

If you aren't sure which one you need, let us study your package. Armstrong's complete laboratory facilities are at your command for deciding questions of sealing. Our artists will help you with design. These services are free and without obligation.

Samples and prices of any type of closure sent on request. Or, better yet, send in a sample bottle for tests and unbiased suggestions. Armstrong Cork Company, 913 Arch Street, Lancaster, Pennsylvania.

Armstrong's Closures

CORKS OF ALL KINDS . . . ARTMOLD CAPS . . . EMBOSSED TOP CORKS . . . DAUBERS . . . CROWNS . . . DU PONT CELLULOSE CAPS
CELLULOSE BEVERAGE BANDS . . . APPLICATORS OF ALL KINDS . . . RUBBER STOPPERS . . . CAP LINERS . . . BUNGS



Mechanical Construction of the C T Cap

GAUGES, micrometers, specially developed testing equipment . . . all play an important part in the manufacture of PHOENIX CT Caps.

The construction of thread, knurl and rolled edge . . . the matching of coatings, litho inks and lacquers . . . these, and many other details come under the sensitive touch of accurate steel fingers or the searching scrutiny of a mechanical eye

Some of the results of this testing of materials, and inspecting of finished product, are as follows:

DECORATIVE COATINGS—Brilliant . . . standard . . . may be duplicated time after time . . . tough, yet exceptionally elastic . . . resist abrasions of handling.

LINERS—Virgin spruce wood pulp board . . . thoroughly oxidized oil paper . . . heavily surfaced wax paper . . . pure, resilient wax adhesive . . . no odor . . . no warping.

DOME—Dome or flat-top optional.

THREAD — Conforms accurately with thread of glass finish. Maximum tolerance is allowed for imperfections or variations in glass.

KNURL—Well-proportioned. Aids in application and removal of Cap.

ROLLED EDGE—Neat in appearance. Strengthens shell and protects fingers.

PHOENIX-HERMETIC COMPANY
Metal Caps for Glass Packages
CHICAGO NEW YORK

Offices: New York, Philadelphia, Boston, Chicago, San Francisco, Los Angeles, Cleveland, Cincinnati, St. Louis
Plants: 2444 W. 16th St., Chicago; 14th Ave. and 38th St., Brooklyn

PHOENIX *Metal Caps*

SMARTER TUBES ...STEP UP SALES!

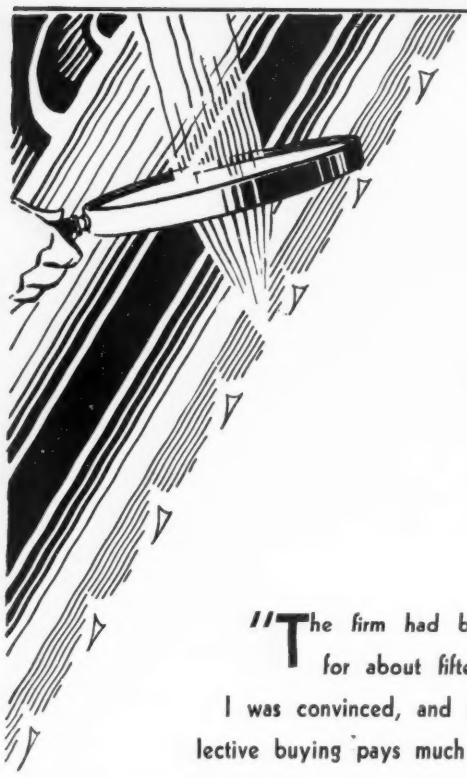
Tube designs grow stale after a time, just as do automobile designs . . . Bright new colors and a clever new design bring new smartness and individuality to stimulate the public's interest in your product.

Those we serve are proving this with profits . . . May we talk over possible improvements in your tubes? . . . A half hour chat with us may prove one of the best business moves you have ever made.

NEW ENGLAND COLLAPSIBLE TUBE COMPANY

17-35 Waller St., New London, Conn.
3132-34 S. Canal St., Chicago, Ill.
New York Office: 370 Lexington Ave., (Cor. 41st St.)

NEW ENGLAND COLLAPSIBLE TUBES



"Confined" Buying

preferred to "hitch-hiking"

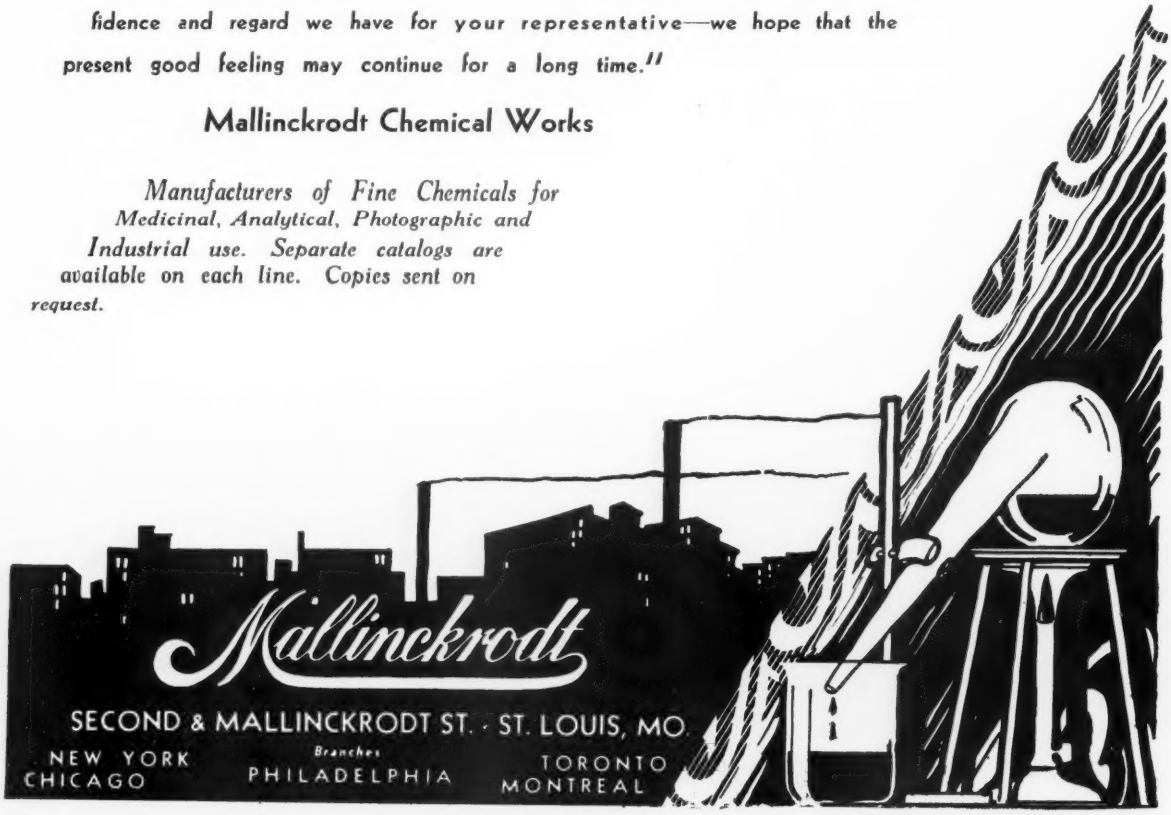
Extracts from a letter by the manager of a prominent manufacturer of pharmaceuticals in Ohio.—Name on request.

"The firm had been buying any place and every place, including you, for about fifteen years. When I accepted the position of manager, I was convinced, and it has been proven many times, that condensed selective buying pays much higher dividends than scattered, hitch-hike buying.

"With this in mind and the direct service we can obtain from St. Louis —the good satisfaction always obtained from Mallinckrodt—and the confidence and regard we have for your representative—we hope that the present good feeling may continue for a long time."

Mallinckrodt Chemical Works

Manufacturers of Fine Chemicals for Medicinal, Analytical, Photographic and Industrial use. Separate catalogs are available on each line. Copies sent on request.



Drug Markets

Vol. XXIX OCTOBER 1931 No. 4

Retail Hysteria

DESPITE the militant spirit displayed at the recent N. A. R. D. convention; despite the widespread attempts to organize retail druggists against the manufacturers, there is no reason why the manufacturers of the drug trade who are treating all retail outlets alike should become hysterical over the unusually disturbed conditions, and join the cry for price maintenance legislation. The retailers threaten to cast out of their stores those nationally advertised items which are drastically cut in price with no attempt on the part of the manufacturer to correct the condition. They threaten such items with substitution. So far so good. Let them try it.

THESE are trying times in any business, and the retail drug business is no exception. Although the demoralized condition of retail drug store prices is generally blamed upon the manufacturers because of their free deals and other methods of giving additional discounts, we have yet to know of one manufacturer who has attempted to sell a retailer a deal by advising him that the deal afforded the retailer an opportunity to cut the price. Business is not done that way. The deal is sold by pointing out the additional profit available to the retailer if he sells at list price.

WHILE we have no brief for the manufacturer who gives secret rebates, advertising allowances, and other concessions to those who have no reason to deserve it, we can not see how the manufacturers generally can be blamed for the cutting of prices by retailers. Certainly no one could blame Squibb for the fact that their tooth paste sold a month ago at 8 cents a tube in Cleveland. Certainly no one can blame any manufacturer who exacts the same price from every outlet for the fact that some of these outlets choose to sell the goods below cost.

PERHAPS free deals are wrong. Perhaps combination offers are wrong. Perhaps manufacturers are wrong in expecting retailers not to meet present day price-cutting conditions in their trade with private brands. But even though all these things are wrong, there is no reason why the manufacturers should be stampeded into building around the retailers a wall that would allow these same retailers to offer the private brand goods at prices which would defy competition by any manufacturer who would attempt to distribute his goods and sell them at private brand prices.

Misunderstood Campbell Director Campbell of the Food and Drug Administration has discontinued the practice of requiring from defendents in actions under the Food and Drugs Act, stipulations that they will not fight cases in court if results of the conferences with the department are not satisfactory to the manufacturers. Not that Mr. Campbell feels that he was not justified in his method—he was misunderstood. Now he will not even allow a conference until after the defendent has been to the legal office of the department and the legal office feels assured that the defendent is "honestly trying to comply with the law."

A correct definition of "honestly trying to comply with the law" is not easy to obtain, but we venture that to this phrase, when Mr. Campbell states it, should be added "as we see it from our interpretation of the law." The fact of the matter probably is that if a defendent—after receiving the first degree from the legal lights of the department—is not impressed with the power that the department possesses to put him out of business, he will not get a chance to stay in business without expending large sums of money.

Mr. Campbell is not misunderstood by the manufacturers, but rather does Mr. Campbell misunderstand the fact that manufacturers are not going to submit meekly to any such foolish crusading such as Mr. Campbell's department has for three years been carrying on to the distinct advantage of the medical profession. Mr. Campbell also misunderstands the fact that manufacturers see no reason to accept the mandates of the department regarding therapeutics when the manufacturers know through actual experience that these mandates do not always represent the true facts.

Mr. Campbell must feel dreadful that he is misunderstood by his pupils, and it must break his heart that he must refuse to take them into his office and reprimand them.

• • •

Calcium Ads Just about the biggest thing the boys in the advertising departments have not spotted as yet is calcium deficiency. Surface tension, hydrolysis, acidity, and perhaps vitamins themselves, never had the possibilities which ingenious minds could uncover in unfolding this drama. The word itself—deficiency—denotes a want, demands a satisfaction. Let us hope that the products which are scientifically sound (we almost said "accepted") will be the first to dramatize this appeal.

Price Maintenance Promotion Carl Weeks, merchandiser par excellence, has drafted his own price maintenance measure to replace the much abused and discredited Capper-Kelly bill. Mr. Weeks has gone further than this in that he has obtained views regarding price maintenance from many connected with the drug trade—most of the views coming from those who have always been in favor of price maintenance legislation for reasons which are obvious. Mr. Weeks has placed all his information in a book which he has distributed quite widely.

We like Mr. Weeks for his ability to adopt and sticking to a policy that is bound to bring him steadily increasing business in the long run. There is no question but that manufacturers who honestly try to have the prices on their items maintained will obtain whatever measure of co-operation the retail druggist can give. Squibb is another house that really tries hard to protect the independent retailer from cut prices on their items.

However, we do not believe that manufacturers generally should commit themselves in favor of price maintenance legislation unless they truly believe that common adoption of the practice would result in greater business for all manufacturers. We do not think it takes nearly so much courage to declare one's self in favor of a practice which is bound to be popular with the retailers, as it does to remain silent and be counted against the interests of the retailer, thus giving to a few a real competitive advantage.

• • •

Radio and Magazines We are sure of at least one thing in radio advertising. Many companies have received rich rewards for reticence toward their own products. This may be due entirely to the public preference for tears and laughter rather than for solid reasoning. It may be due partly to a relief from the frenzied pitch which testimonial copy, scientific claim copy, fear copy, etc., has reached.

Perhaps we may see the lessons which radio advertising is teaching, applied to magazine copy. It may even reach the point at which an advertiser will contract for prize winning fiction, travel tales, and biographies, and produce them in serial form with the briefest of brief announcements as to the names of the sponsors. What a break such a development would be for the editors.

A Losing Method

Encouraged by the further declines in the stock market, many purchasing agents will doubtless feel it their duty to make a real effort to bear the markets for every item which they buy. The tendency to prey upon the weak sellers is too tempting to let slide. Every purchasing agent doubtless feels that he must do everything in his power to get a lower price than his competitors, even, if by so doing, he completely demoralizes the market of that raw material, which upset might mean chaos to the end that neither he nor anyone else can ascertain what the bottom of the market is and whether he has been instrumental in placing some of his competitors in a more favorable position than himself.

It is a peculiar course of reasoning that reaches the conclusion that the only way to make money is to bend all one's efforts to upset markets generally. The fact that others might do the same thing with the result that the buyer's company's sales force will meet the same set of conditions which will mean either no profit or perhaps an actual loss merely because other buyers adopt the same tactics because it seems the thing to do, does not seem to matter.

Most every leading executive knows the vicious circle of price cutting. Price cutting is a boomerang weapon. Exactly the same can be said for excessively drastic buying tactics. Such methods not only result in some one else buying still lower, but react completely to upset the market for the goods which the bearish buyer sells.

• • •

Ten Years Ago

From Our Pages, October 1921

Out of several hundred American industrial groups, Congress proposes to select the manufacturers of toilet goods to carry a tax of four per cent. on their sales. The tax covers all toilet goods including shaving creams, tooth pastes, perfumes, shampoos, and articles of like nature.

Suits brought against Antoine Chiris, Lautier Fils, and Roure-Bertrand Fils, of Grasse, France, by Coty and Houbigant, Paris perfumers, for alleged combination to illegally advance the price of perfume flowers and flower oils, has been definitely thrown out of court by the Court of Appeals of Aix-en-Provence.

Production of acetylsalicylic acid in the new specially built plant unit of the Dow Chemical Co., at Midland, Mich., is to begin this week.

The Standing Rock Quicksilver Mining Co. has been organized at Fresno, Cal., with capital of $200,000.

The cinchona bark contract of 1918 between the Dutch Java planters and the quinine manufacturers is not expected to be continued after its termination, December 31, 1923.

• • • New and Non-Official • • •

• • •

Are Buyers Cynics ?

"A cynic is a man who knows the price of everything and the value of nothing."

Buyers keep your seats! It was Oscar Wilde who said that and he died some time ago.

• • •

Wired for Sound

Broadcasting companies claim to have statistics proving that all the toothpastes "on the air" are crowding all the tooth pastes "not on the air" out of 20 per cent. of all radio homes.

And if some of them don't stop the exaggerated, high-pressure sales talks which mar their broadcasts, they'll be crowding 20 per cent. of the radios right out of the present radio homes.

• • •

He Must Have Heard the Depression Talk

A New York maker of men's clothing just announced that prices on his suits would be reduced to $116. Before rushing in to take advantage of this unusual bargain, we want to know if he gives two pairs of pants.

• • •

Babies Cry for Them

Now that it is definitely established that carrots are the vegetables richest in vitamin A, the mothers of the country will have a real sales talk to hand Junior who will not eat them because they make his hair curly.

• • •

The Washington Merry-Go-Round

One of the drug associations thought it would be nice to have one of the officials of the Department of Commerce address its annual convention. A reply to the invitation came, not from the official himself, but from an agency, which said that it could be arranged to have him speak at that time. Further inquiry developed the fact that his regular fee for conventions was $500.

• • •

Lydia Pinkham Again

According to the Lydia E. Pinkham Medicine Co., the old order does not change. The copy used in the company's 1931 advertising is the same as that used in 1902. It has just been modernized a bit. Thus Young Mothers (1902) becomes We're Both So Happy With Our Baby; Irritable Women (1902) becomes Irritable, Grouchy Wives; Joyful Maternity (1902) becomes The Thrill of Motherhood; and so on.

• • •

We'll Have to Buy One Ourselves

We think the most conservative man in the world is the friend of ours who has a "Graflex" camera but who will not yield to our pleas to turn it at funny angles so as to experiment with modern photography.

• • •

Sales Opportunities

"Mum" is the first deodorant to direct a national sales and advertising campaign to the male market for this type of product. Before inaugurating this campaign "Mum" salesmen canvassed their outlets and found that "Mum," advertised only for women, sold readily to men.

The Poetry of Grasse

The poetry of this famous flower section is not limited to the fields of flowers. The ancient village holds many attractions for the people who visit this section each year.

"Free" Colgate's Dental Cream selling for 10c on the "sidewalks of New York"

Combination Offers in a Weak Market

SINCE the days prior to the fall of 1929 when all trick schemes of merchandising were quite in vogue, the voices of those who opposed these methods as destructive of sound business principles have attracted far more attention than they did during the days when anything that brought results was looked upon as the product of the mind of a genius. Not alone has the free deal by which the retailer receives more goods than he supposed to be paying for, come in for caustic criticism, but particularly has the combination offer to the consumer arisen in the minds of many as a most destructive condition. Not that this method of merchandising will cease, or even be abandoned by a majority of those who have indulged in it, but at least the feeling that this is the one method by which to establish a permanent and profitable position in any sharply competitive market is fast losing ground.

Perhaps one strong reason why the practise will not cease under present conditions lies in the fact that it affords a manufacturer an opportunity to cut prices to the consumer without definitely lowering the price on any individual item; and manufacturers point out that lower prices are the rule of the day and prices must be cut by the most desirable means in order that consumers with lower buying power can be induced to buy goods. Manufacturers always opposed to the combination deal answer this argument for its continuance with the question, "How do these manufacturers attempt to justify the combination offer to the consumer as a temporary measure in depression, when the scheme had its origin in most prosperous times ?"

And, "How do these manufacturers ever expect to quit the combination deal and thus get their prices up again, when such a scheme will certainly be carried on some of their competitors no matter how prosperous times become ?"

Another manufacturer opposed to the practice of combination offers to the consumer speaks as follows:

"Either it is sound merchandising to price an item at retail directly in accordance with its actual cost, or it is not. If manufacturers are to price products at far more than their value and give away another item with it, then all manufacturers should adopt the same method. There is no rime or reason to basing prices in accordance with the cost of some premium product, anymore than there is any reason for basing prices on what the public will pay when the object is to obtain large volume."

Relative Conditions Unchanged

Conditions appear different today than they were a few years ago, says a prominent manufacturer, but basically business must be done in much the same way. Just as there was merchandise offered at prices far above a true value in the days of prosperity, similar products are being sold today. The only difference is that in the days before the depression these products were offered as fresh merchandise, while today they are being held back for sales and combination offers. The public is looking for bargains today in a far greater degree than was the case a few years ago, but still the lower prices do not always mean good merchandise at lower prices, but many times the price paid merely represents the true value of cheap goods.

From these deductions the manufacturer asks how can drug and toilet goods manufacturer be expected to lower their prices appreciably when they are unable to substitute cheaper goods for the advertised products which they have been offering ? The only bargain values offered in most lines, even in the toilet goods line where $2.00 compacts have been openly sold at retail at as low as 29 cents in reputable chain stores, came from a necessity on the part of the manufacturer or retailer to liquidate his stocks and bring his inventory in line with present day conditions. It will be noticed that the very large majority of true sales are being held on products that change in style, of which lines, in a limited way, toiletries happens to be one. There is no style trend in drug products and many toiletries to force this condition seriously upon the drug and toilet goods manufacturers, and there is no sound basis upon which they can drastically cut their prices or indulge in combination offers. True enough, most of the raw materials that enter into the production of drugs and toiletries, but this amount is not a sufficient percentage of the total cost of most advertised products to make any great difference.

One of the markets—among the many specific drug and toilet preparations—which has been dominated by combination offers during the past three years or more, is the tooth paste market. In this market it has become almost standard practice for a consumer to receive some premium with his tooth paste, whether it be a tooth brush or a dental mirror. The highly competitive state of this market with leaders falling behind; coming up again; new products trying to reach the top by forceful means, have brought this condition about. Now we have the spectacle of a tooth paste which has been among the few at the top ever since tooth paste has been used, entering upon an era of free distribution of their product as a premium with their other goods. Colgate's tooth paste has been offered free with any of the other Colgate or Palmolive toiletries. This case is the direct antithesis of most combination offers in that the item which is the largest seller is the premium given with any of others, rather than the other being given to the buyer of the leader.

Selling "Free Goods"

But the result is much the same. Colgate's tooth paste, with the statement "Free—Not to be Sold" upon the carton, is being offered for direct sale at all sorts of prices down to three for a quarter. On New York street corners, peddlers stand with a corrugated box at their feet, and sell the item at almost any price. It is reported that some of these peddlers have been selling the twenty-five list price tooth paste for a nickel.

There can be no mistake as to the effectiveness of this method from the point of view of Colgate-Palmolive-Peet. While there is no telling how profitable the free distribution of the tooth paste is in comparison with straight sales of the tooth paste and not so large sales of the other items, it is certain that the volumes of all goods which they have placed in the hands of the retail druggists is enormous. And no matter at what price the tooth paste is sold, the fact remains that it is being sold and will be used, each extra tube of Colgate's displacing a sale of a competitive product. Thus Colgate should at the present time be dominating the tooth paste market from point of view of the number of tubes sold, if in no other way, and the advertising value of this move should not be underestimated. Furthermore, no matter what the retail druggist does with the tooth paste, he still has in his hands the several other Colgate-Palmolive products which he must sell. These products also are bound to make themselves felt upon competitive products. One glance at the quantity of Colgate-Palmolive products displayed on the counters of many retail druggists immediately convince one that there are going to be more of these products find their way into consumers' hands than before. The druggist has the goods and he has to get rid of them.

It would seem as though there is no direct method of fighting this sort of competition. If all manufacturers attempt to adopt the method used by Colgate and others, they are apt to cause nothing but chaos in the market. If they continue as they have been doing in the past, they are almost certain to feel a loss in sales volume. Some manufacturers have entertained the idea of reducing their selling prices to the consumer with the direct result that the margin between cost and selling price which permits these combinations offers to be made, will be entirely removed. This is the proper remedy for the situation in the firm opinion of a manufacturer who says:

Lower Selling Prices

"There is only one means of placing the market for drugs and toiletries on a sound basis during present times. We all know that the potential market for any item is directly limited by the amount of money people have to spend. Therefore, if the selling price to the consumer is lowered, the volume will increase. This is necessarily true today when people suddenly have had taken away from them the money with which to buy those which they are accustomed to have. People want to buy the things which they bought in the past, but they have not the money to do so. The only way of getting around the problem is by reducing prices so that these people can extend their purchases.

"The main reason why combination offers are successful today lies in the fact that a combination offer means a lower price to the consumer for the items involved in the offer. Free deals by which the retailer is supposed to make a greater profit on the sale of the items are useless if the retailer keeps this additional profit as he is supposed to do, for the retailer can not do anything to stimulate the sale of any particular item today unless he can offer it at a lower price, and he is told by the manufacturer that he is not to cut the price and thus pass the additional profit on to the consumer.

The Way Out

"Even if the manufacturer turned his back upon price cutting following a free deal offer to retailers, the benefit of the cut price would not be widespread as some retailers would see no need for cutting the retail price as they would be of the opinion that it would not stimulate sales.

"The only way I see of correcting this situation—and it will soon need drastic action from all accounts—is to directly base retail selling price on cost and eliminate all possibility of anyone giving anything away. This would mean that the public would be able to buy a greater number of these items, and also that all would be forced to work on an even footing."

Cum Laude

THIS is a continuation of the series of letters begun in our August issue, which set forth the reactions of leaders in the drug trade to the appearance of Drug Markets Catalog and Directory. Others who have been kind enough to write in expressing their opinion of this 1931 edition are:

Harry Noonan, *President,*
The Drug Products Co., Inc.

We compliment you upon getting up such a valuable and useful book.

R. G. Sappenfield, *Vice-president,*
The W. T. Rawleigh Company

We are sure that it contains information that will be very valuable to us.

Joseph Rosin, *Chief Chemist,*
Merck & Co., Inc.

Even a superficial examination convinces me that it is going to be a very useful compilation.

Bern B. Grubb, *President,*
Lafayette Pharmacal, Inc.

It is one of the finest publications of its kind which it has been my pleasure to inspect, and I assure you it will be employed frequently in our institution.

John F. Anderson, *Director,*
Research and Biological Laboratories
E. R. Squibb & Sons

I am sure that we will find many occasions to make use of it and find it of real value to us. Congratulations on the most excellent presentation.

Edward C. Merrill, *Chief Chemist,*
United Drug Company

It certainly has a wealth of detailed information covering suppliers and materials, which should be of real value to the trade.

Charles G. Gery, *Vice-president,*
Henry K. Wampole & Company, Inc.

Drug Markets Catalog and Directory should prove to be a very helpful reference book.

George W. Pegg, *Chief Chemist,*
William R. Warner & Co., Inc.

Your very comprehensive catalog and directory will no doubt very frequently be called into use as it contains valuable information.

Gordon A. Bergy, *Head Department of Pharmacy,*
West Virginia University

Even the first day of use has proven it to be invaluable as a reference book.

John Glassford, *Chief Chemist,*
McCormick & Co., Inc.

I congratulate you upon the excellence of the workmanship you have shown in getting out this catalog.

W. B. Williams, Jr., *Secretary,*
W. B. Williams, Inc.

We find it wonderfully interesting and valuable.

Dr. Sergio Herrera,
Laboratorio de Especialidades Farmaceuticas

I want to congratulate you for the valuable data gathered in it which makes it so useful in every respect. It deserves the applause of everybody connected with the field covered by the book.

E. Baissonmuth, *Assistant Manager,*
Cascrain & Charbonneau

We find it very interesting and it will be of great help to us.

$5,000.00 Contest

open to everybody . . . 328 Cash Prizes

"The jar is going to win," says W. B. Faraday, Manager of London Branch Office

"Ingram's has done so astonishingly well with its distinctive blue jar, that more than a million men like the cool, stingless shaves it brings them! You Americans are all for the new and up-and-coming. But, however good the tube, habits aren't broken overnight! I put my shilling on the cool shaves in the good old blue jar."

W. B. Faraday

"Place your money on the tube!" says J. W. Brooks, Manager of Chicago Branch Office

"In England it may be different, but this is Chicago! The great majority of men prefer a tube! A big percentage of those men who used the old jar, because of the fine cool *shaves Ingram's gives, will be glad to know the new Ingram tube is here! The tube will win—put your money on it."*

J. William Brooks

"Long live the jar" *cries England*
"Then give us the tube" *says Chicago*

CHICAGO and England are at it again. For Mr. Faraday, our London manager, with true British conservatism, sticks out for the cool shaves held by the historic blue Ingram jar. And our Chicago sales manager, with breezy insistence, can't see anything but a violent victory for the new blue and white tube. It's a hot fight about the coolest shaving cream ever put together.

We've stirred up the most violent partisans since we decided to give away $5,000.00 for the best opinions as to which would win.

Shortly before January 1st, Ingram's was brought out in the new tube. Of course, *it's still sold in the jar.* And remember, in five years, that jar built one of the largest shaving cream businesses in the world!

Here are Ingram's sales for the last four years:

1926	751,392 Jars
1927	1,148,628 Jars
1928	1,560,828 Jars
1929	1,992,998 Jars

The blue jar introduced the first and best of all cool shaving creams. But many men, we know, prefer a tube. Now, they can have their choice of either package at the same price.

Consider the relative advantages of the tube and jar. Then write, *in 75 words or less,* how you think the new tube will "go over"—how it will sell in comparison with the famous old jar and what effect it will have on the established sales of the jar. Predict, if you like, just how many tubes will be sold. Neatness, brevity and logic of reasoning, not your prediction, will be the factors that count in awarding the prizes.

The Great $5,000.00 Ingram Contest

To the 328 contestants who submit the best opinions, we will give $5,000.00 in cash prizes as follows:

First prize	$1,000.00
Second prize	$500.00
Third prize	$250.00
Next 325 prizes	each $10.00

Have you ever tried Ingram's? It was the first of all COOL shaving creams. Because of its three cooling and soothing ingredients Ingram's tightens and tones the skin *while you shave.* Your druggist carries both the tube and the jar. Or send the coupon for a free 10-day supply of COOL Ingram shaves. But, whether you use Ingram's or not, enter the contest! Do it today!

Clip Coupon for 10 COOL SHAVES

INGRAM'S SHAVING CREAM
Box 996, General Post Office
New York, N. Y.

I'd like to try ten cool Ingram shaves

Name_____

Street_____

City_____ State_____

(Coupon has nothing to do with contest. Use only if you want free sample.)

INGRAM'S
Shaving Cream

CONDITIONS OF THE CONTEST

1. Contest closes at midnight, December 31st, 1930. Entries postmarked later will not be considered. To insure absolute fairness, we have engaged Liberty Magazine to act as the judges. Their decisions will be final. Names of winners will be published as early as possible in 1931.

2. Contest is free and open to any person except employees of Bristol-Myers Co., the makers of Ingram's, and Liberty Magazine, and their relatives. You need not buy nor subscribe to this or any other magazine, nor buy or use Ingram's Shaving Cream, to compete.

3. You may submit as many opinions as you wish during the period of the contest, but none must exceed 75 words in length. Submit each opinion on a separate single sheet of paper, legibly written or typed on one side only, your name and address at top.

4. If two or more contestants submit opinions of equal merit, the full amount of the prize will be awarded to each.

5. Address Contest entries to Ingram's Shaving Cream, Box 996, General Post Office, New York, N. Y. Contestants agree that entries become the property of Bristol-Myers Co. and may be used by them, in whole or in part, for advertising or other purposes. Entries cannot be returned, nor can Bristol-Myers Co. or the judges engage in correspondence about the contest.

An advertisement, which as part of a series, accomplished more for Bristol-Myers than any other type of copy

Mr. Bristol is unable to pick any single piece of copy as the most effective. Rather does he illustrate a series which accomplished a real task for his company in a most effective manner.

Our Most Effective Advertisement

By

Lee Bristol

THIS advertisement is one of a series which we considered distinctly effective and successful from the standpoint of actual results.

When we took over the Ingram's Shaving Cream business in 1928 one of the first things we wanted to learn about the product was the value of the Ingram jar. A searching consumer investigation showed that the jar was an important factor in the business. It had a remarkable memory value. The name of the product might be forgotten but the image of the blue jar was sure to stick.

Another interesting thing was the strong reaction to the jar. Its friends swore by it with the same fervor and enthusiasm that its opponents swore at it. It was apparent to us, after a survey, that there was a sizable jar market to be exploited but that the long term prospects of Ingram's might be handicapped if the jar continued to be the sole container. The investigation showed how strongly Ingram users felt about the jar. We asked: How would they take to the tube? Which was the better container? That started many an argument here in our office, and differences of opinion arose as to whether tube sales or jar sales would be the greater.

It was such an interesting subject that the public advertising contest was conceived. This contest which was to last for a year centered the reader's interest on the fact that the product was obtainable either in jars or tubes, and invited their opinions as to the outcome, and gave them a chance at some prize money while doing it.

The problem then became one of introducing a new package for a product without damaging the sale of the old one. Additional business and not substitute business was what we were after.

The conflicting opinions of various members of our staff were used as the background for contest copy. Cartoons by Sykes pictured the battle of tube vs. jar in an amusing fashion.

So great was the interest in this question and in our contest that we received over 67,000 contest entries and more than 85,000 coupons.

The contest was truly such a close one that we did not know the winner (tube or jar) until the last week in December. Then the tube sales just nosed out the jar by the close margin of 809 dozen. We feel that as a direct result of the contest we were enabled to introduce our product in new package form, and, at the same time, to hold those customers who are sold on the product in the jar package.

Ideal Drug Wholesaling

The set of drug trade practices upon which the National Wholesale Druggists' Association has been working for the past four years were presented in their latest form at the opening of the Association's convention by H. J. Ostlund, of the N. W. D. A. Statistical Division. These have been abstracted from the point of view of the manufacturer.

H. J. Ostlund

WHOLESALERS apparently still regard themselves as the balancing factor in drug trade manufacture and distribution, but since their function is not unique and can be performed by other agencies, the life of the wholesaler is one of considerable friction and strife. A few years back, Dr. E. L. Newcomb, the active and aggressive secretary of the National Wholesale Druggists' Association, attempted to have the drug trade—manufacturing, wholesaling and retailing—agree upon a set of fair trade practices which would tend to eliminate most of the conditions which bring disputes between the three divisions of the trade. Dr. Newcomb traveled to practically all the conventions of the three branches of the trade and presented his idea of what these practices should be. Now these practices have been further developed in cooperation with H. J. Ostlund, Statistical Division Director of the N. W. D. A. In the new form they were presented by Mr. Ostlund at the opening session of the N. W. D. A. convention on October 19.

While the principles are supposed to protect each branch of the drug trade against unfair practices on the part of any other branch, the prinicples apparently constitute an attempt to protect the wholesalers against what the wholesalers deem unfair practices on the part of the manufacturers. A complete adherance to the practices given would undoubtedly result in an ideal condition for the wholesalers, even though the manufacturers might be at somewhat of a disadvantage.

At the start, Mr. Ostlund enunciates the general principles that "distributors are entitled to renumeration for the cost of distribution, plus a profit for service rendered and risks taken; each unit of sale must show a profit." Sales made at a loss are deemed misleading and economically unsound.

As means of developing economy, efficiency, and more intelligent competition, the use of the N. W. D. A. Standardized Index Price Card, the N. W. D. A. Standardized Catalog Page by wholesalers' salesmen, and N. W. D. A. approved simplified invoice form, are required.

What Discounts?

On the subject of discounts, Mr. Ostlund gives no definite figures except with regard to new and slow-moving proprietaries, which, he says should yield the wholesaler 16 2/3 and 2 per cent. When first introduced, says Mr. Ostlund, all proprietaries are slow-moving, and the great majority continue in this classification and entail high distributive costs. There are ordinarily no grounds for expecting slow-moving items ever to become rapid movers if they do not do so reasonably soon after introduction.

New items added to well established lines must not be regarded in the same category as new proprietaries, and the discounts upon these items should

be the same as the balance of the line. New merchandise for which no demand has been created should be placed in the wholesalers' hands on consignment, in Mr. Ostlund's opinion. Also it is economically unsound for the wholesaler to grant cash discounts in excess of one per cent. on proprietaries and toiletries of comparatively slow turnover.

With reference to slow-moving and dead stock, it is recommended that frequent lists of such items be compiled at frequent intervals by individual wholesalers, and through an interchange of these lists between wholesalers, proper exchange be effected.

Discrimination

Subsidized advertising based on a condition of a certain quantity of goods purchased by a retail establishment is declared as constituting discrimination. Proper method says Mr. Ostlund, would be to offer the advertising equitably to all retailers handling the advertised item, regardless of the quantity of goods purchased.

Regarding manufacturers selling retail establishments direct, the practices state in effect that the wholesaler is justified in discouraging competition from those manufacturers who distribute through wholesalers at the same time as they sell direct at prices which the wholesalers can not meet. Also it is stated to be the function and obligation of every manufacturer to outline the policy he wishes followed in the distribution of his goods, defining the territory in which he wishes his goods introduced and distributed, and to select wholesalers in whom he can place full confidence.

It is unsound policy, says Mr. Ostlund, for the wholesaler to be required to buy general line goods of a manufacturer in a certain proportion in order to obtain the best discounts on specialties made by the same manufacturer, as this practice tends to interfere with the maintenance of properly balanced inventories. It is also unsound for wholesalers to ask for and accept advance dating from manufacturers—except in the case of freezable or seasonable goods—as this forces the wholesaler to participate in the financing of the manufacturer's inventory, even when he has not paid for it.

Free Goods Practices

Regarding free goods the practices recommend the following conditions: Free goods should be included with goods purchased in unit shelf packages or shipping cases, being labeled as containing free goods and the amount stated. Free goods should be shipped directly to the wholesaler with the order. When new free deals are offered by manufacturers, floor stocks of wholesalers should be protected by the supply of free goods necessary to cover the goods already on hand, or by a credit memorandum. The charge-back system of renumeration in the handling of free goods, particularly on small deals should be eliminated. Wholesalers should strictly observe manufacturers' requests relative to period during which free deals are offered. The most economical size of deals is that which will last the average retailer sixty days, or in the case of seasonal goods, not over ninety days. Free goods given in consideration of a quantity purchase should not exceed from eight to sixteen per cent. of the quantity purchased. Free goods should be of the same item as that purchased, or some item closely related to it such as the retailer would have to buy if not given in the deal. Free goods should not consist of new and untried merchandise which the manufacturer is trying to unload.

Ten Cent Sizes

Ten cent sizes of lines ordinarily sold in twenty-five cent, fifty cent, and one dollar sizes, should be available through wholesalers to retailers who request the ten cent sizes. Wholesalers should not recommend to retailers that they carry ten cent sizes, except in the few instances where retailers have keen competition with other merchants selling this class of goods. It is economically unsound to give ten per cent. discount on ten cent sizes, except in shipping cases. It is uneconomic to sell ten cent merchandise at wholesale in quantities of less than one dozen. Wholesalers should receive the same per cent. of renumeration from the manufacturer for distribution of ten cent sizes as he receives for distribution of larger sizes, and also the inclusion of ten cent merchandise should be permitted in the making up of an assorted order.

Editor's Correspondence

Cosmetic Markets

Editor, Drug Markets,
Sir:

Although a few well-known firms in the cosmetic industry claim that 1931 to date has been their biggest year, it is true that the industry as a whole has not done as well as formerly. On the other hand it has not suffered as much as you imagine for the reason that women have been known to do without proper food for the sake of beauty. Moreover, unemployed women realize the commercial value of an attractive exterior. They realize further that personal charm is distinctly a marketable asset. I don't think anyone need worry about the future of cosmetics. The fads will go; so will the fraudulent (private label) cold creams at five dollars a jar. But the staple products will continue to hold their own. By staples we mean powders, creams, rouges, lipsticks which sell from 50 cents to $2.00.

H. A.

A Subscriber Speaks

Editor, Drug Markets,
Sir:

The September issue of Drug Markets has just come to my attention and I want to congratulate you on the very fine feature articles it contains.

The subjects have not only been well and clearly presented but they seem to have been carefully selected and most of them cover matters of vital importance to the Drug Industry.

It seems to me that you are doing very fine work and I want to ask that you send us three additional copies so that we can be sure that all of our organization have an opportunity to familiarize themselves with these articles.

S. B. P., Jr.

Permissible Heart Medicines

Dr. Cullen, Chief of Drug Control, gives his views as to what medicines may be sold for treating the heart, and how these products can be labeled so as to comply with the law.

Dr. Frederick J. Cullen

THERE appears to be a mistaken impression on the part of the public, and even of the drug trade, as to how medicinal preparations for the heart may be labeled, under the Food and Drugs Act. There have been obtained from trade circles two different ideas as to what constitutes such proper labeling. One idea that has prevailed among drug men, it seems, is that a preparation to stimulate the heart may be labeled a "heart stimulant", but may not be labeled a "heart tonic." Another idea upon which the trade has apparently been acting is that preparations for the heart may be labeled to indicate their therapeutic action on that body.

Both of these ideas are erroneous, according to Dr. Frederick J. Cullen, Chief of Drug Control. Let us hear what he says:

"We object to any reference to treatment of the heart, or of heart diseases, on a label of a preparation, even though it may be suitable for that purpose, if the preparation goes to the general public. There is no way that we know of to so qualify any such labeled reference in such a manner as to make it unobjectionable."

"But how can a recognized, efficient and bona fide heart stimulant, for example, be labeled ?" Dr. Cullen was asked by Drug Markets. "Digitalis is such a stimulant, is it not ? What would be the proper method of labeling a digitalis preparation ?"

"The Administration would look with objection on a label statement on a digitalis preparation going to the public to the effect that digitalis is a heart stimulant, Dr. Cullen replied, "because there are heart conditions where digitalis is contraindicated and would be dangerous if used. Such use would be absolutely the opposite treatment from what a patient should use for that particular condition of his heart. If such a patient purchased and used a digitalis preparation labeled a heart stimulant it would be under a misapprehension as to what kind of medicine he needed. Hence, our objection to such a label as you inquire about."

Continuing, Dr. Cullen said, in substance, that any labeled reference to the heart, to heart disease, or to its treatment, on a preparation going to the public might tend to create similar misapprehension on the part of the patient. Drug Control believes, apparently, that the public generally is not sufficiently informed about the differences in conditions of heart disease and the various medicinal treatments thereof, to be able to determine accurately what his condition is and what sort of preparation or treatment may be recommended for it.

Such general terms as "heart disease", "diseases of the heart", "weak heart", and the like, have long been tabooed by the Food and Drug Administration. But the rule as to labeling of heart preparations has been broadened more recently. Label mention of particular diseases of the heart is not permitted, according to Dr. Cullen.

Nitro-glycerine is admittedly a heart stimulant, sometimes administered hypodermically. Digitalis has already been referred to. Strychnia is recognized as having a stimulating and tonic effect upon the heart, Dr. Cullen says, and strophanthus is similar in effect. These drugs are believed by government experts to be all right in their proper place, if properly administered. But, says Dr. Cullen "they should not be sold under labels as heart tonics or heart stimulants."

"Then, how should they be labeled," he was asked. "If they do not go to the general public, but to the pharmacy trade and the medical profession,

would it not be proper to label them as stimulants or tonics ?"

He replied: "The doctors and the pharmacists know what these drugs are and what for they should properly be used. There is no object in labeling them for those classes, with reference to heart treatment. All that is necessary is to label such drugs plainly for what they are, whether it be digitalis, strychnia, nitro-glycerine, or what not, together with proper identification of the strength of the preparation, the size or weight of tablets or pills."

Heart Depressants

Dr. Cullen was asked about preparations sometimes classed as heart sedatives or heart depressants, whether they could be labeled as such. His reply was in the negative. Elaborating on this point, the Chief of Drug Control said:

"Certain bromides are regarded as sedative in their action. If they have a sedative effect upon the heart, the chances are that they are more or less sedative in their general effect upon the human system. We would not look with objection upon a sedative preparation bearing the labeled general statement "sedatives". However, we do not believe that the manufacturer should pick out special individual parts of the body and state that their sedative preparations will work upon that one particular organ.

"The same general principle may be applied to preparations of a stimulant character. Many of these preparations, if they had a tendency to stimulate the heart, would also have a tendency to stimulate other organs or functions of the body. It does not seem fair, under such circumstances, to permit a stimulant preparation to be labeled as a heart stimulant, when its stimulant effect is general in character.

"The same idea may be applied to tonic preparations, which may have a tonic effect on the heart while they are affecting other parts of the system in like manner. It is proper to label a tonic as such without injecting the word 'heart' or any other organ of the body. So may a stimulant be labeled as such, but not as a 'heart stimulant'."

With reference to so-called heart depressants, such as certain coal tar preparations, Dr. Cullen and drug trade representatives apparently agree that it is not very definitely known just how these things affect the heart; that is, whether they act directly upon the heart. Some drug experts believe that the direct action is to depress the nerves. If that is so, they believe the heart would be depressed indirectly. In that event, it is not believed officials would view with approval a statement that they depress the heart. However, said Dr. Cullen:

"Many of these so-called heart depressing drugs are not intended for treatment of heart conditions. They are anodynes. They have a certain amount of sedative effect, while relieving pain. Some of these drugs are more depressing in their effect upon the heart than others are. For example, acetanilid is more depressing than anti-pyrene or phenacetine."

Drug trade people assert that coal tar preparations have small effect upon the heart. Perhaps that is why some such preparations have been publicly claimed as "not affecting the heart", in label statements and the like. On this point Dr. Cullen differs from trade interests responsible for such statements.

"The Administration," said Dr. Cullen, "objects to a statement carried on labels or in advertising that coal tar preparations do not affect the heart. That is not a true statement."

Effect of Aspirin

Asked whether it were true as to aspirin, as claimed, Dr. Cullen replied:

"It is not true as to aspirin, which is a coal tar derivative. When a manufacturer puts on the market a coal tar preparation, you have to bear in mind that it is the individual with whom you are dealing—the individual who purchases and takes the preparation. When you go on the market and make a statement that your coal tar product does not affect the heart, you must take into consideration all sorts of people, the well and the sick, the strong and the weak. Some people in some of these classes are apt to be affected, as to their hearts, by a coal tar preparation. You may have symptoms from such effects that are severe. Others may have no symptoms whatever. In view of these circumstances, it is not permissible to label a coal tar preparation with a statement that it will not affect the heart."

Referring to specific heart diseases, Dr. Cullen says that among the heart diseases as to which unwarranted claims have been made on medicinal labels is angina pectoris. The use of that name on a drug label is not permitted, he said. Angina pectoris, in the opinion of the Drug Control head, is incurable by medicinal means. The condition, he says, is due to a hardening of the arteries, which reacts to produce a severe pain in the heart. Sometimes amyl nitrate or a similar drug is given in the treatment of angina. This drug is intended to produce a quick dilation of the blood vessels, which condition, in turn, may sometimes relieve the heart, in a measure. But, Dr. Cullen does not think that this drug should be labeled for angina.

Nor should dropsy, rheumatism of the heart, neuralgia of the heart, or arthritis, be mentioned on the labels of alleged heart medicines. The Food and Drug Administration has long held thumbs down on labels for any kind of "rheumatism" and neuralgia, believing that those words cover a multitude of conditions brought about by various causes, for which drugs do not always constitute adequate treatment and cure. Arthritis is not very well understood, either, it is believed. It is claimed by some to be related to heart conditions. Unwarranted claims have been made concerning arthritis in label claims on medicinal preparations, Dr. Cullen believes, and he

(Continued on page 415)

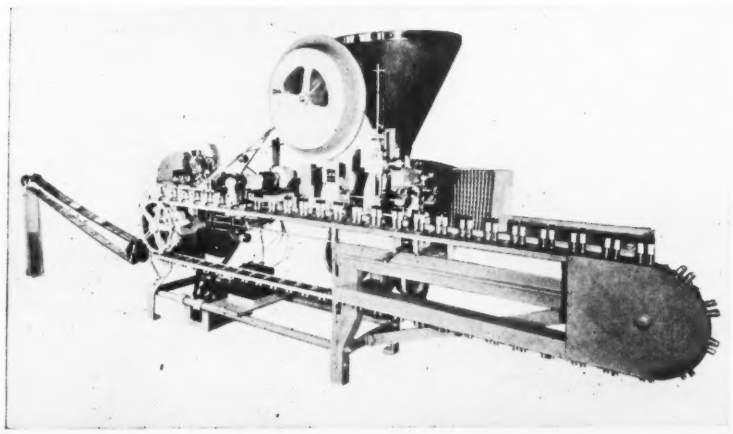
New Tooth Paste Competition

DEFINITE steps are being taken by the Charles H. Phillips Chemical Company (Drug, Inc., subsidiary) to place Phillips' Dental Magnesia among the leaders in the tooth paste market. While this product has long enjoyed an excellent sale both here and abroad as a fifty cent retail seller, the manufacturers have long been of the opinion that a much larger consumption could be developed if the cost to the consumer could be reduced. Thus the decision was made to market a twenty-five cent size and enter the product into direct competition with the large volume twenty-five sellers.

The method of introducing this new package is rather unique, although it involves at the moment complete free distribution. Salesmen of the company are pressing hard on this item with the offer to the retailer to give him a twenty-five cent tube of the tooth paste for every twenty-five cent bottle of Phillips' Milk of Magnesia that he will display on his counter. Together with the free tube of the tooth paste goes a paste-board clip which joins the two items together and offers the fifty cent value for twenty-five cents. This offer is not made for the goods that the retailer has in stock, but only for that portion of it that he will agree to display on his counter.

It is pointed out by some that this offer has a double attraction for retailers in that it not only places the retailer in a position to offer an attractive value to his customers, but also it places the retailer in a better position to obtain the full list price for the Phillips' Milk of Magnesia—an item that has an excellent consumer demand and therefore must be carried by practically every retailer, but which is

(Continued on page 401)



New type of automatic tube filling machine with a capacity of 100 tubes a minute, or 47,000 tubes per day with one girl, now operating in the Phillips plant

Lower Priced Cosmetics?

PERFUMES and cosmetics are not exempt from feeling the touch of the hand of the present economic depression. It can readily be realized that if people generally do not have as much money to spend as they had before, the number of dollars spent in the aggregate for these products must necessarily be less than it was before. But it is too much to expect that the women of the country are going to do without cosmetics and perfumes—these things have become necessities to those who would appear well dressed. They are perhaps as important to proper appearance as any article of clothing that a woman wears. To some extent women can get along with less of the products since they will naturally use them more sparingly than they did when money was plentiful, but on the other hand, if sparing use of the products will not permit them sufficient, they will use the amount of money they have to buy cheaper lines which produce the same result.

For this reason there has been a swing to the lower priced lines that were to a great extent spurned before. High priced cosmetics and perfumes must necessarily suffer most, and the cheaper lines will for the most part show a gain.

But the leading manufacturers are not going to allow their volume of business to slip away from them through any uncontrollable readjustment of values,

and it is only natural that the manufacturers of the higher priced lines should attempt to liquidate those stocks which they have on hand and readjust their future products to fit into the class of prices which the people will pay. If the large majority of the women of the country are to buy perfumes and cosmetics at lower prices, then the large manufacturers will price products within their reach.

There is also another significant reason why manufacturers are pricing their perfumes and cosmetics lower, beside the fact that they must meet the competition from other nationally known manufacturers who sell at lower prices, and that is the increased sharpness of competition from the private brands as the result of their also being sold at lower prices. While some women might not be willing to buy those products which are known to be lower in price, due to the fact they always regarded them as inferior when they could pay the price for the better classes of these goods, they might listen very closely to the story told them by the retailer as to the merits of the private brand goods. The statements that these products are made from the same ingredients as the best products and that the lower prices are due to the fact that advertising cost is at a minimum and that the goods are sold direct without heavy distributive charges, might find a very receptive ear. Therefore, these products form a very serious menace to the higher priced products when money is not so plentiful as it has been.

As a leader in meeting this trend, d'Orsay has introduced a complete line at what are called "popular prices," under the name of Comtesse d'Orsay, which line includes perfume, face powders, lipsticks, compacts, bath salts, sachet powder, talcum powder, dusting powder and toilet water. The line has been introduced through the finest department stores who have advertised it and given it generous window space.

Private brand merchandise which the women would not buy when they could afford higher prices, will make rapid inroads if manufacturers do not adjust their price ranges, is the opinion of one manufacturer who says:

"It is only natural that manufacturers of perfumes and cosmetics must readjust their price scales in much the same manner as the clothing manufacturers had to readjust theirs. While people must have these things they must have them at lower prices or do with much less. Manufacturers of the luxury class of products can find that this can be accomplished in a manner that will bring them a desirable margin of profit and a constant volume of business, rather than a diminishing margin of profit and a diminishing volume that would seriously endanger the future of the manufacturer's business." For if the manufacturers are not willing to readjust, then they must face a serious loss. And this loss will not only come through a swing to the lower priced lines which have long been known.

"The appeal of private brands is much more potent today than it ever was. The tendency to at least try these products is of much greater moment when money is scarce than it was when money was plentiful. I am firmly of the belief that private brand cosmetics will cut seriously into the volume of our leading manufacturers of toiletries unless steps are taken to prevent it. And the only step I know of is a readjustment of values."

Industry's Books

A Modern Herbal, by M. Grieve, edited by C. F. Leyel, 888 pages (2 vols.), Harcourt, Brace & Co., New York, $15.00 net.

Easily the most complete thing of its kind we have ever seen. Over one thousand plants are treated in individual descriptions which give botanical, medicinal, culinary, and cosmetic data together with a background of folk-lore and facts concerning cultivation. The more than 200 illustrations give excellent detail, and as a collection, are alone worth the price of this work. No reference library on crude drugs should be without it.

The Structure of Crystals, by Ralph W. G. Wyckoff, 497 pages, The Chemical Catalog Co., Inc., New York, $7.50 net.

The second edition of this comprehensive work brings up to date the record of the advances of recent years. The first part deals with methods of crystal analysis and the second with results, giving structures of various types and groups.

How Foreigners Are Taxed in France, by P. A. Bernardet, edited by O. C. Zilisch, 167 pages, Brentano's, New York, $2.50 net.

A simple practical guide to French taxes as applied to the foreigner who sojourns, resides or has business interests in France. A complete, helpfully indexed and practically indispensable handbook for such as come within those groups.

Adressbuch der Seifen—, Parfumerie-und kosmetischen Branche Deutschlands, 601 pages, M. DuMont Schauberg, Koln, Germany.

A comprehensive and thorough directory of the German cosmetic industry. Contains an alphabetical directory of soap, perfumery, toilet preparation and cosmetic manufacturers comprising some 3,000 firms; a directory of the above arranged according to products; a list of wholesalers, import and export agents of these products; lists of specialties and trade-marks, directory of suppliers to this trade, scientific institutions, etc.

Your Money's Worth, by Stuart Chase and F. J. Schlink, 285 pages, The Macmillan Company, New York, $1.00 net.

This is about the fourteenth reprinting of this extremely interesting work and a re-reading after four years indicates that it has lost none of its original appeal, although many of the cases cited have long since fallen by the wayside. The indictment of the drug industry, among others, has long since lost its sting, but Mr. Chase's lively style is still absorbingly interesting.

Graft in Business, by John T. Flynn, 318 pages, The Vanguard Press, New York, $3.00 net.

A remonstrance against the various forms of graft in business which, "in essence, are profits drawn off from some perfectly legitimate business enterprise for some unnecessary service, perhaps some service forced upon it". Does not deal with "racketeering", but with commercial bribery and corporation raft. An interesting presentation by a practiced writer on business and economics.

Drug Control and How It Should Be Changed

By Clinton Robb*

While advising drug manufacturers to make their advertising copy conform with permissive label claims, Mr. Robb urges establishment under the law of a board to pass on label statements. This plan was first proposed by Drug Markets in May 1929.

ONE of the factors which long has made and still makes for uncertainty and unsatisfactory conditions in the drug manufacturing industry may be described as collateral advertising, which embraces all claims and statements made outside the package, as in newspapers, magazines, almanacs and booklets. As amended to date, the Food and Drugs Act is limited in scope to the package itself, and this limitation necessarily deprives the Food and Drug Administration of the Department of Agriculture of jurisdiction over printed matter not accompanying the package in interstate commerce, however at variance may be the claims in such extraneous copy with those upon the container labels.

While the Government, in its efforts to deal with misrepresentation in collateral copy, has recourse to the Postal Laws and Regulations and the laws creating and defining the powers and duties of the Federal Trade Commission, it is felt in official circles that these measures are inadequate for the proper censorship of claims outside the package. This feeling has deepened since the Supreme Court of the United States, in the Raladam case, recently handed down a decision which, if it does not in effect present a practical bar to the jurisdiction of the Federal Trade Commission over copy pertaining to ready-packaged medicines, at least deprives the Commission of the broad powers it asserted over such advertising prior to that case. Moreover, the Post Office Department, while it can consider all forms of printed matter in a proper case and even resort to letterheads and store displays in developing a manufacturer's intent, of course lacks jurisdiction over a case involving no use of the mails.

This situation hardly can be regarded as less unsatisfactory to the manufacturer than to the Government, irrespective of the outcome of the attempt by the Federal Trade Commission to obtain reconsideration of the Raladam Case by the Supreme Court. The manufacturer is confused by the apparent overlapping of the present activities of the various agencies of the Government having to do with the conduct of his business, to which list may be added the trademark section of the Patent Office. He is inclined to believe that the passing of his claims by any one such agency amounts to approval and sanction by the Government itself, relieving him of further worry; and when he discovers that his full compliance with the requirements of any one governmental agency in developing or revising his claims has not kept him out of difficulties with some other agency asserting the right of censorship of his printed matter, he may feel that he has been badly treated and discriminated against by his own Government.

To meet this situation, which calls for correction in the best interests of all concerned, it is imperative that the manufacturer adopt and carefully adhere to a single standard for all printed matter, whether within or without the package. It is my candid opinion, after rather broad experience in this and related fields, that only by giving the same degree of care to his labeling and collateral copy is it possible for the manufacturer to obtain reasonable assurance and security for the future of his products and the business developed around them. Whatever Congress, the Departments or the Courts may do about

*Counsel, United Medicine Manufacturers Association

collateral advertising, the manufacturer can safely do no less than this.

In expressing these views I do not wish to be understood as advocating that the manufacturer of proprietary preparations be denied the right, common to manufacturers in general, of regarding and referring to their own products and brands as of particular utility or worth and as without superiors on the market for the purposes indicated. Such "puffing" or "dealers' talk," within reasonable bounds and embracing no direct or implied claims of medicinal value, is not calculated to deceive purchasers and therefore does not come within the scope of laws designed for the protection of the public.

Variations in Ad Copy

Nor do I wish to convey the impression that I think advertising copy should follow the label in form as well as substance. There are legitimate and persuasive reasons why the manufacturer should place the minimum of claims and statements on container and carton labels and detail his story to the public in circulars, booklets and collateral copy. It is inevitable that, with the advancement of science and changes in professional views, the revision of his formulas and claims by the manufacturer will become necessary from time to time, if he would keep up to date medicinally and legally and thus out of difficulties with the Government. In effecting such periodic revision of his claims, it is essential that the manufacturer avoid the necessity of making substantial or striking changes in his trade dress or package labels, by which the public has come to identify his products and around which he has built up a valuable good will. By employing a simple label, that will have to be altered little if at all to meet changes in scientific and professional thought, and by practically confining this work of revision to his collateral copy, the manufacturer will be enabled to keep his products and their claims up to date with a minimum of expense and interference with business. The mere fact, therefore, that a manufacturer deliberately develops collateral advertising that is more specific and descriptive than his labels and somewhat different in form is not necessarily to be construed as an attempt on his part to take advantage of the present situation with respect to collateral copy, since such action may spring from motives not open to question and be dictated by sound business judgment.

Again, these observations are not intended to reflect any definite or final conclusion on my part as to what Congress should be asked to do about the collateral advertising of proprietary preparations. Whether the practical result of the ruling by the Supreme Court in the Raladam Case will be the eventual abandonment by the Federal Trade Commission of its attempted censorship of proprietary advertising as an alleged unfair method of competition in the sense of the statutes creating and defining the powers and duties of the Commission, whether those statutes should be amended to confer that asserted power, or whether the Food and Drugs Act should be so amended as to embrace printed matter without as well as within the package, are questions for more extended discussion and careful consideration. The point I am trying to stress here and now with all possible emphasis is that, regardless of what may be done in Congress or by the various agencies of the Government in this connection, the manufacturer can afford to do nothing less than regard the law as already applying, in substance and effect, both to his labels and collateral copy. It is my best judgment that any commercial structure he may build from plans that do not contain this specification as to advertising copy will result in a business resting upon the shifting sands.

But, while my mind remains open as to what Congressional action should be taken with respect to collateral advertising, frankness and the desire to offer a constructive thought impel me to record my present and tentative views upon this question. If the Food and Drugs Act is to be amended to this end, as I am inclined to believe it should be for reasons already outlined, it is my belief that such amendment also should provide for the Board of Review in drug cases. I long and consistently have advocated as a remedy for what I regard as deficiencies and infirmities in existing statutes. With all respect to those who who may differ with me, I believe the creation of such a Board would remove many grounds for misunderstanding and controversy between the manufacturer and the Government and prove advantageous and satisfactory to all parties concerned.

Type of Board Needed

The Board I have in mind would provide a speedy and informal review of disputed regulatory rulings as to proprietary medicines and preparations, without the necessity of protracted and expensive court proceedings. This Board would differ widely from any that has been or now is in existence in connection with the administration of the Food and Drugs Act, in both personnel and powers. It would have among its members a manufacturer, a pharmacist, a chemist, a physician, a veterinary, an attorney and a representative of the Government. When so requested by any aggrieved manufacturer, it would be the duty of the Board promptly to hear and decide any disputed ruling by the Food and Drug Administration as to the right of the manufacturer to make some particular claim or statement regarding his products, and such decision would be conclusive and final. Through such summary and inexpensive proceding, it would be possible for a manufacturer, differing with representatives of the Government as to the consensus of medical opinion regarding the virtues of the combination of drugs employed in his product, or honestly disagreeing with those representatives as to the fair-

ness and truthfulness of his claims and statements covering that product, to secure prompt settlement of the controversy with full protection of the public interest and his own rights. It no longer would be necessary for him to choose between acceptance of an advance ruling by the Department, regarded by him as erroneous and constituting an unfair handicap to his commercial success, and a court proceeding whose termination, even if favorable to his contentions, would be likely to come only after his business had been destroyed and his good will rendered valueless, often compelling him virtually to start all over again and rebuild a commercial structure reared through years of patient toil.

Let it be understood that my criticism here is of the present system itself, rather than of those who are charged with the duty of enforcing the Food and Drugs Act. The situation which now exists in connection with such enforcement is unfortunate from the point of view of the Government as well as from that of the industry, particularly in cases where there are wide differences of opinion between the advisors and representatives of the Department of Agriculture and those of the manufacturer. It ought not to be necessary or possible, in cases of that kind, for the Government to insist upon immediate compliance by the manufacturer with an adverse ruling of the Food and Drug Administration until a disinterested third party, in the person of the Board just mentioned, has passed upon the points in issue and decided between the conflicting views and contentions of the two parties involved, the Department and the manufacturer.

Courts No Answer

I respectfully submit that it is no answer to this suggestion to say that the manufacturer now may appeal to the courts, for in my judgment the judicial review provided by existing statutes fails to meet the essential requirements of an adequate remedy, either in timeliness or practical value. Not only should the manufacturer be relieved of the virtual necessity of abandoning his right to a review of disputed regulatory rulings, under penalty of the seizure of his products and their elimination from the market while he is obtaining a decision as to the reasonableness of his contentions, but the Department of Agriculture should be relieved of occasion for continuing the role of party in interest, prosecutor, judge and jury. The sooner this relief comes, through the proposed Board of Review or otherwise, the sooner will there be desired improvement in the relations between the manufacturer and his Government and a marked advancement of the public interest. It necessarily is an unpleasant duty for the Department, under the present system, to sit in what often amounts in actual practice to final judgment of its own rulings in a case in which, personifying the Government, it has a direct interest; and such a practice does not foster respect for law and the institutions of Government, either in those who feel that they are the particular objects of injustice and discrimination or in the public at large.

In this discussion of ways and means for promoting and preserving friendly and mutually helpful relations between the manufacturer and the Government, I have reserved for my final remarks a subject second to none in its importance or influence in this connection. I refer to what has been the policy of the Food and Drug Administration of insisting that a manufacturer of a proprietary preparation, neither in the name of that medicine nor in his conspicuous label claims or references to its scope and remedial powers, shall mention a particular disease or organ of the body unless the medicine be a treatment for that disease or capable of relieving all ailments which may attack that organ.

It is the frank position of the industry that this official rule of construction or interpretation of labeling should be discontinued or at least modified; that, with all deference to the opinions and intentions of those who may have been responsible for its adoption, this rule is inconsistent with fundamental legal principles and rules of construction; that it is unfair to the manufacturer, unnecessary to the full protection of the public, and a serious handicap to the Government itself in the enforcement of the Food and Drugs Act.

Diseases Should Be Mentioned

Briefly, the contention of the industry is that when a manufacturer refers to some disease or organ of the body, either in the name of his medicine or in its claims, and accompanies that name or those claims with an equally conspicuous specification of or limitation to particular uses or powers, such a label is not untruthful or calculated to deceive purchasers, either upon general legal principles or in the special sense of the Food and Drugs Act.

Attention is drawn to the fact that, in determining the effect of language or the intent behind it, the law commonly construes the mention of particular conditions or the enumeration of certain uses and purposes as excluding all conditions, uses and purposes not mentioned or enumerated or necessarily to be implied therefrom. It also may be urged, on behalf of the manufacturer, that inasmuch as the Food and Drugs Act has been judicially declared to authorize the sale of any truthfully labeled medicine and the statute fails to provide any special rule for determining the scope and effect of language employed in labels, Congress necessarily intended that the Government and the Courts, as well as the manufacturer, should apply the usual legal rule of construction just stated.

Strong support for these contentions of the manufacturer is to be found in recent court rulings in several cases, including those involving the product known as as "Lee's Save-The-Baby" and a preparation of the Chichester Chemical Company.

Carpotroche Oil

By George S. Jamieson*

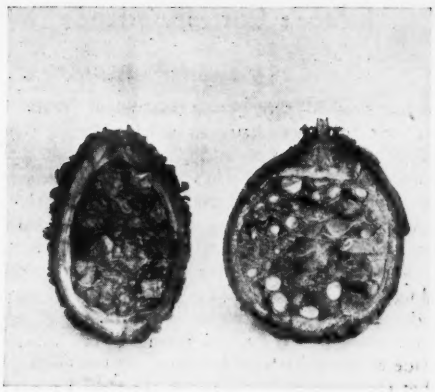
The oil which government scientists expect will largely replace chalmoogra oil in the treatment of leprosy, originated in Brazil. Dr. Jamieson gives the first authentic information regarding its production and properties.

Four year old seedling

CARPOTROCHE oil, known locally as Sapucianha and by some other names, is found in the seeds of fruit from the tree *Carpotroche brasiliensis* or other closely related species indigenous to Brazil. Other species of this genus from various other Central and South American countries have been described, but as yet no examination has been made of their seed oils. In addition to this genus, there are two other American genera known as *Lindackeria* and *Mayna*, the seed oils of which have been found similar in composition to those of the Brazilian Carpotroche species. In 1928, G. Kuhlmann (Memorias do Instituto Osnaldo Crux 21, Pt. 2, 389) described several species of *Carpotroche*, *Lindackeria* and *Mayna*, giving some of the characteristics of the seed oils, but undoubtedly others remain to be discovered. Theodoro Pickolt of Austria in 1868 made

*Bureau of Chemistry and Soils

Carpotroche from the 1929 crop



Longitudinal sections of fruits

a partial examination of Carpotroche oil and reported that the trees were then abundant in the States of Bahai, Minas Geraes, and San Paulo.

The genera *Carpotroche*, *Lindackeria*, and *Mayna* belong to the natural order of Flacourtiaceae, which includes the well-known Chaulmoogra tree, *Taraktogenos kurzii*, various species of *Hydnocarpus*, native to Asia, the East Indies and the Philippines, and the African *Oncoba* species of which five have been described. For those not familiar with this family of plants, it should be noted that only those members whose seed oils consist largely of glycerides of chaulmoogric and related cyclic unsaturated acids are of interest in connection with the treatment of leprosy. These oils are characterized and readily distinguishable from all other fats and oils by the large dextro rotation which they exhibit. It is interesting to observe that a great many centuries ago the natives of Africa, Asia, and South America discovered something of the medicinal properties of these oils and used them in the treatment of leprosy, skin diseases, and wounds.

From the illustrations given, some idea can be obtained regarding carpotroche flowers, leaves, and

Carpotroche flowers

Stock seedling

fruit. The fruit may vary in size even on the same tree and weigh from about 100 grams to over a kilo. The air dried seeds, which nave been examined, varied in weight from about 0.3 to 1.1 grams. The kernel content ranged in different lots of seed from 61 to 69 per cent. of the whole seed or nut. The kernels contained from 63 to about 69 per cent. of oil. The oil, which was expressed from a sizable quantity of the kernels by means of an Anderson expeller in the laboratory, had a very pale yellow color and was very limpid at ordinary temperatures. It gave the following characteristics: Specific rotation at 20° in chloroform +58.9°, Refractive index at 25° 1.4792, Acid value 0.4, Iodine number (Hanus) 112.8, Saponification value 201, Unsaponifiable matter 0.2 per cent., and saturated acids 1.5 per cent. It will be observed that this oil was remarkably low in free fatty acids and that it contained but little unsaponifiable substance and saturated acids. This is in marked contrast to chaulmoogra oil, which contains large quantities of free fatty acids and often considerable quantities of non-oil constituents. This oil also contains 9 per cent. or more of saturated acids.

During 1927, a liter sample of commercial carpotroche oil was received from Brazil and examined with the following results: Specific rotation at 20° in chloroform +53.9°, Refractive index at 25° 1.4781,

Specific gravity at 25° 0.9545, Acid value 1.8, Iodine number (Hanus) 108, saponification value 202.5, unsaponifiable matter 0.6 per cent., Acetyl value 5.8, Reickert-Meissl value 0.7. The low acidity as well as the figures given for the other characteristics showed that the commercial product was of fine quality.

Apparently A. Machado and Company at Leopoldina, Minas Geraes, Brazil is the only firm licensed to engage in the extraction of carpotroche oil and the preparation of the ethyl esters from the mixed fatty acids, for intra-muscular injection, which appears to be the principal method employed for the treatment of leprosy in Brazil.

As this oil, on account of its fine quality and the unusually large quantity of optically active acids of the chaulmoogric series present as glycerides, is probably superior to any other known oil of this group it is obvious that any extended use of the oil outside of Brazil would necessitate the cultivation of the seed, particularly as the available supply from the wild trees appears to be quite limited. Several years ago, with this in view, Dr. P. H. Rolfs, Consultor Tecknico de Agricultura do Evetereniaria de Minas Geraes began to investigate the propagation and cultivation of carpotroche trees on the college grounds at Vicosa from the seeds of the two trees which have been growing there for fifty years or more. During the past five years some hundreds of seedlings have been planted. When about 3 or 4 years old they commence blooming, although a few begin earlier. The seedlings from the seed of his so-called number one tree, which is a more profuse fruiter than any other tree with which he is acquainted, give a ratio upon blossoming of one pistillate to twenty staminate plants, but he states that as the pistillate flowers are perfect that this ratio does not matter greatly.

As was to be expected, the fruiting seedlings showed considerable difference in the quantity of fruit which they bore. However, some had the heavy fruiting characteristics of the parent tree, which in the 1929 season, for example, gave 798 fruits weighing 170 kilos and from which 28 kilos of air dried seed were obtained. More recently Dr. Rolfs found that the seedlings can be readily budded from the parent trees, which insures them of having the same fruiting characteristics, and besides the budded plants fruit much earlier than the others. The young seedlings are very tender, but after a few years they gradually become much more hardy. Consequently, it is believed that they could be grown in the southern part of Florida or other regions having a similar climate.

As there are probably a number of unknown species of carpotroche and perhaps species of other genera of the Flacourtiaceae growing in Brazil, it is desirable that an exhaustive exploration should be undertaken in order to discover them and properly classify the species found, as well as to collect a sufficient quantity of fresh seed from each one so that their oils could be examined and cultivation experiments made of the more promising plants.

Editor's Correspondence

Editor, Drug Markets,
Sir:

I have just finished reading your editorial on "Walk—Do Not Run" in your September issue. You certainly hit the nail on the head. It struck me as particularly appropriate because I had just returned from a selling trip in which I had ample opportunity to observe just how the drug trade was acting in this matter. Buyers were cordial but just about as cold blooded as they could be.

We tried to explain to them that with present prices on various crude drugs, the gatherer could not make over 25 cents to 50 cents a day at the highest. We informed them that the various dealers are losing money even at present prices because quotations made to them this year left no margin of profit. We told them that the goods were lower than they had been for twenty years, and some purchasing agents had the audacity to tell us that thirty years ago goods were bought at a lower level.

As you state, no one denies the right to buy closely and well, but it is certainly bad business to club prices down, which, in the case of crude drugs, means a loss to the collector and starvation wages for the gatherer. What makes it worse is that the drug manufacturers have been doing a fair business and have felt the depression less than most other industries.

I do hope that every purchasing agent as well as other executives in the drug manufacturing line have read your editorial. If they haven't already, I should like to recommend it to their attention.

H. L. S.

Editor, Drug Markets,
Sir:

Naturally I read Drug Markets religiously every month from cover to cover. It contains so much interesting information that no one in the trade can well afford to be without it.

May I call your attention to a little matter in your August issue? On page 145, in the article, "Cosmetics for the Nails", you speak of a formula containing 80.5 parts of White Vaseline.

As you undoubtedly know, Vaseline is a registered trade mark, and in giving a formula of this type I think the official designation, Petrolatum, should be used.

Do you agree with me?

W. F. K.

Editor's Note—Drug Markets proof readers have standing instructions against the appearance of trade-marks or brand names, except when obviously designated and called for. The appearance of "Vaseline" in the article mentioned was a palpable error which Drug Markets is glad to correct.

Editor, Drug Markets,
Sir:

Your persistence in digging up new material and information on psyllium seed has made it extremely difficult for an honest fleaseed packager to do business. I had barely straightened out my literature and advertising on the black seed when you sprang the blonde on us. Now I have just got that under way when Mr. Clevenger comes along in your September issue and tells us about a new seed, three times as good as the others.

Although I have always admired your progressiveness I, for one, would appreciate your holding back any more new developments along this line at least until those of us packaging psyllium have a chance to catch up with you.

C. R. M.

Editor, Drug Markets,
Sir:

Allow me to congratulate you for having a regular contributor with the ability of Mr. Francis Chilson.

I have read a good variety of journals of your type in the past few years, both foreign and domestic, and have yet to find any articles as genuinely informative and to the point as those by the above-mentioned author.

I. B.

Medicinal Chemistry

Names and abstracts of the scientific papers presented before the Division of Medicinal Chemistry of the American Chemical Society.

New Standards on Resistance of Staphylococcus aureus to Phenol.

By George F. Reddish, Ph. D. Lambert Chemical Co.

In 1925 present standards of resistance of Staphylococcus aureus to phenol were established after a study of twenty-five newly isolated strains. Half of these strains were killed by 1-60 phenol in 5 minutes at 20° C. Since all strains resisted 1-70 for 10 minutes, this was considered as the minimum standard.

During the past six years experience has shown that this standard is too lenient and allows the use of weak cultures. Results obtained in the study of various germicides with strains of Staphylococcus aureus which resist 1-70 phenol for 10 minutes and those resisting 1-70 in 15 minutes show a much greater variation than was at first anticipated.

It has been decided, on the basis of experience obtained during the past six years and as the result of recent investigations, to raise this standard so that weak strains will be excluded. The new standards of resistance for Staphylococcus aureus are as follows: 1-60 phenol must not kill in 5 minutes and 1-70 phenol must not kill in 15 minutes at 20° C. when 0.5 cc. of standard broth culture is added to 5 cc. of the phenol dilution. The standard for use in testing antiseptics at 37° C. is as follows: 1-80 phenol must not kill in 5 minutes and 1-90 phenol must not kill in 15 minutes at 37° C. when 0.5 cc. of standard broth culture is added to 5 cc. of phenol dilution.

This new standard is being incorporated in the forthcoming bulletin from the U. S. Food and Drug Administration on methods of testing disinfectants and antiseptics.

Facts and Fallacies in Disinfection. II.

H. C. Hamilton, Parke, Davis & Co.

In a previous paper under the same title specific substances were cited to illustrate the misconceptions very commonly held in regard to the effectiveness of germicides. In this communication the subject matter deals entirely with the question of Methods of testing. In particular the Phenol Coefficient as a measure of effectiveness is shown to be of only limited value because of the rigidly defined conditions of the methods commonly used. These methods rarely are in accord with the practical application of the disinfectant: the values so found may be quite misleading.

Stability of Fluid Extract of Ergot.

Maurice I. Smith and E. F. Stohlman, National Institute of Health.

Stability of fluid extract of ergot was investigated in a series of preparations in which both the physiological method of Broom and Clark and the chemical colorimetric method of assay were used. Data were secured showing that storage of fluid extract of ergot at elevated temperatures is a potent factor in deterioration, while storage at low temperature favors stability. In like manner oxidizing substances were found to accelerate deterioration while certain reducing substances retarded the rate of deterioration of the physiologically active alkaloids. Varying the pH fluid extract of ergot within limits of 5.2 to 2.2 did not seem to favor its stability when subjected to deteriorating influence of heat.

Mechanism of Reaction Between Cystine and Iodine in Aqueous Medium.

K. Shinohara McNeil Fellow, Research Institute, Lankenau Hosp. Phila.

It has been thought that cystine is unoxidizable by iodine. Several analytical methods for cysteine or cystine has been established upon this foundation. The investigation of Okuda's iodine method has led the author to find the fact that cystine is oxidized by iodine to cysteic acid just as well as by other halogens, although the reaction velocity is very small compared to that of bromine.

Cysteic acid crystals have been isolated with a practically quantitative yield of which the physical and chemical properties have been studied.

The kinetic study of the reaction velocity indicates the reaction is consecutively bimolecular when the pH of the solution is constant.

The reaction mechanism has been hypothetically explained and the substance which is in oxidation reduction equilibrium in cysteine solution is suggested from this hypothesis.

Aminoalcohols VIII. Benzoic Esters of Arylalkanolamines.

Walter H. Hartung, James C. Munch and Ernest B. Kester. Sharp & Dohme Co.

The physiological properties of compounds of the epinephrine and ephedrine types are well established. Benzoylation of the secondary alcoholic hydroxyl gives a compound which preserves the structure of the original pressor molecule and at the same time assumes analogy to anethetics of the novocaine type. They may be prepared according to the directions of Wolfheim, Ber. 47, 1440 (1914). The benzoic ester of phenylpropanolamine possesses anesthetic potency approaching that of cocaine and at the same time retains the ability to produce, to a diminished degree, a rise in blood pressure. This substance is, so far as the authors are aware, the first synthetic compound shown to have both anesthetic and hypertensive properties. Its preparation and behavior are described.

Preparation and Toxicity of Some Aromatic Arsenious Oxides H. A. Shonle and C. R. Eckler Eli Lilly & Co.

During the past five year's investigation of the trypanocidal and spirachaeticidal action of a series of organic arsenicals, it was necessary to prepare, as intermediates, a number of aromatic arsenious oxides and chlorides. Since the toxicity of but few of the described aromatic arsenious oxides have been published, the relative toxicities of the series prepared should be of some interest. The toxicities of the following compounds are reported: p-amino-phenyl-arsenious oxide, p-acetyl-amino-phenyl-arsenious oxide, p-hydroxy-m-amino-phenyl-arsenious oxide, p-hydroxy-m-acetyl-amino-phenyl-arsenious oxide, p-

(Continued on page 399)

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Hair Toiletries

G. Karaivanoff, of Bulgaria, has prepared an article telling the composition of present day hair and beard preparations used in Europe. This article has been translated and abstracted by A. T. Frascati.*

KARAIVANOFF deplores the fact that present mode does not employ the old-fashioned perfumed oils, brilliantines, pomades, etc., which he considers indispensable to the proper care of not only the skin but also of the scalp and hair. He believes these should be brought back into usage and proceeds to give a number of formulas for these cosmetics hoping that each one interested will thus have a necessary basis for their preparation which he can vary according to his preference.

I. Hair Oils

Hair oils are largely exported to the Orient, Africa, Australasia, India, etc. and are manufactured by the Americans, Germans, Japanese, Dutch, English and French. Either mineral oils or vegetable oils can be employed for this purpose; olive, almond, peanut, soya bean and cottonseed being preferred to the mineral product because they nourish the scalp and are better solvents for the perfumes and colors. In actual practice, mixtures of vegetable and mineral oil are often employed. Since the vegetable oils tend to rancify, Karaivanoff recommends to benzoinate them. As an example; one heats in a water bath, 5 kilos of Olive oil, adds ½ kilo of bicarbonate soda or the hyposulfate, and when this is dissolved, lowers into the oil, a bag containing ½ kilo of benzoin tears until the benzoin is all dissolved;—or one can add directly ½ kilo of benozic acid. With this 5 kilos of benzoinated oil, one can preserve 100 kilos of perfumed oil; i. e., add still further 95 kilos of untreated oil. For perfume, 500-1000 gr. of terpineol are used although some prefer diphenyloxide. Formerly the oil was perfumed by infusing it with fresh flowers but in modern times the absolute essences are used because of the greater convenience. From 2 to 6 gr. per litre of absolutes is needed, or for cheaper products, artificial perfumes can be used. As fixatives for the perfume, *fixative oils* of musk, labdanum, opopanox, vanilla and heliotrope are prepared and added to the above.

*Ungerer & Company

Oil of Natural Musk:

15 gr. grain musk
1 ko. benzoinated olive oil,

the musk being triturated with the oil in a mortar, the rest of the oil added, the whole allowed to macerate, and settle, then decanted and filtered. The procedure is similar for labdanum (using 10 gr. of the green French resin labdanum to the kilo); for opopanox, 18 gr. of the resin plus 1 gr. oil of cumin; for vanilla, 50 gr. chopped vanilla beans plus 1 gr. vanillin, or 5 gr. vanillin per kilo; for heliotrope, 10 gr. heliotropine, etc. Perfumes containing alcohol or aldehyde must be avoided.

Carnation:

90 cc Iso Eugenol
15 " Benzyl Iso Eugenol
3 " Geranium
5 " Ylang Ylang
7 " Heliotropine

Fix with a benzoin infusion.

Trefle:

105 cc Amyl Salicylate
15 " Lavender
45 " Linalyl Acetate
8 " Petitgrain

Fix with a coumarin infusion.

Muguet:

90 cc Linalol Extra Bois de Rose
75 " Terpineol
5-7 " Petitgrain
5-7 " Kananga

Use coumarin as fixative.

Violet:

90 cc Alpha Ionone
50 " Linalyl Acetate
22 " Ylang Ylang
8 " Benzyl Acetate
15 " Cedarwood
20 drops Bitter Almond

Fix with Orris

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77-79 Jarvis St., Toronto

Rose:

60 cc Terpeneless Geranium
20 " Rose d'Orient
8 " Santalol
15 " Diphenyloxide
5 " Alpha Ionone

Fix with appropriate fixative.

A few examples of different qualities of perfumed hair oils follows:—

Heliotrope Extra:

1,000 cc Orange Flower Oil
600 " Cassie Oil
400 " Jasmin Oil
1,000 " Benzoin Oil (4/1000 Olive Oil)
1,000 " Sweet Almond Oil
10 gr Heliotropine Amorphous
2 " Linalyl Acetate
0.5 " Bitter Almond

(Note: "Oil" in the first four means *olive oil* prepared with the specified perfume and *not the essence.* (Abstractor).

Rose Extra:

1,000 cc Rose Flower Oil
300 " Tuberose Flower Oil
200 " Terpeneless Geranium Oil (1/200 Olive Oil)
500 " Benzoinated Olive Oil in which are dissolved
2 " Bulgarian Rose
2 " Resin Labdanum
Few drops of Terpeneless Clove

For cheaper hair oils, various mixtures of benzoinated peanut oil, petrolatum and paraffin oil are used, as olive and sweet almond are quite expensive. The perfume can also be substituted with synthetic compositions of lower value.

The most agreeable colors are the yellow and green shades, the green being obtained by the use of oil soluble chlorophyll, labdanum and oak moss. Yellow is arrived at by the utilization of natural jasmin, rose, etc. (The *green*, French habdanum is meant, Abstractor.)

For an anti-parasite oil, a few decigrams of absolute essence of pyrethrum are added.

II. Pomades for the Hair

Fashion would permit greater use of scalp pomades if one applied them properly (the well-known method of parting the hair and brushing the cosmetic directly on the scalp is recommended). Formerly, beef marrow and bear's fat were employed as a base for hair pomades, today a high-grade lard is used, obtained as follows:

Melt on water bath the lard with ¼ of its weight of 20% NaCl, let boil 2 to 3 hours, cool, decant the salt water which carries all the impurities. The fat is again melted by gentle heat and strained through a fine cloth. To preserve, dissolve in the lard, on the water bath, 1 kilo boric acid and 2 kilos benzoic acid, for every 100 kilos of fat. Decolorization is accomplished by agitating it with hydrogen peroxide of 12 volume strength. The benzoinated pomade thus obtained will keep fresh for years if filled into earthenware pots and placed in a cool spot.

Lanolin is also recommended for pomades because it is easily absorbed by the scalp and does not turn rancid. Its odor however, is disadvantageous and a large percentage of a strong perfume is required.

Cocoa butter is also used but must be benzoinated. Today petrolatum is largely used but is regarded merely as a lubricant and of absolutely no therapeutic value. Finally, if one desires pomades of heavier consistency, ceresine or sun-bleached beeswax is incorporated.

A few examples of pomades of different qualities are appended:

Extra Fine Pomade Bases:

(a) 1,000 gr. Unperfumed pomade
60 " Lanolin Anhydrous (oxygenated)
(b) 1,000 gr. Perfumed pomade
60 " Lanolin as above
(c) 1,000 gr. Benzoinated lard
500 " Unperfumed pomade
100 " Lanolin as above

Fine Pomade Bases:

(a) 350 gr. Benzoinated Oilve or Sweet Almond
1,000 " Cocoa Butter
150 " Ceresine or Beeswax
(b) 1,000 gr. Cocoa Butter
350 " Benzoinated Oil

Petrolatum Pomade Bases:

(a) 1,000 gr. Snow White Petrolatum
500-1,000 " White Ceresine
(b) 1,000 gr. Petrolatum
400 " Ceresine
200 " Light Yellow Rosin
200 " Paraffin
20 " Stearic Acid

Sometimes equal parts of petrolatum and lanolin, or petrolatum and some animal fat are used as a base. Perfuming is carried out in a manner analogous to the perfuming of the hair oils.

A specific example of a pomade to prevent falling hair and promote hair growth is given below:

(a) Melt in a water bath, 1 kilo anhydrous lanolin in 250 gr. of rosemary water (presumably water separated from the steam distillation of rosemary) and treat the mixture with hydrogen peroxide of 12 volume concentration, beating it until cold.

(b) Melt in water bath:
800 gr. Petrolatum
200 " Cocoa Butter
300 " Paraffin

(c) Prepare 250 gr. of birch bud oil as follows: Digest 60 gr. of fresh birch buds in 250 gr. of warm oil for ½ hour; let cool, strain through a fine cloth. (Birch bud oil is now obtainable

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in this country which could replace this. (Abstractor).

(d) Prepare 100 gr. of quinine oil by infusing 15 gr. gray quinquina bark in banzoinated olive oil.

(e) 25-50 gr. oeillet perfume.

To prepare the pomade, melt (a) and (b) on the water bath then add (c) and (d), agitate vigorously until thoroughly cold. Allow to stand one week before filling into jars. The pomade should be applied to the scalp as suggested above. Very good results are claimed if applied regularly.

III. Brilliantines and Bandolines

Brilliantines for men are divided into non-homogenous and homogenous liquids and concrete-homogenous. The non-homogenous liquids are made from mineral oil and perfumed alcohol. Homogenous liquids are obtained by dissolving in 90-95% alcohol, castor oil or glycerine or even vaseline oil, purified and perfumed. (The latter suggestion appears to be an error since mineral oil and alcohol would not yield a homogenous liquid. (Abstractor). The homogenous solid brilliantine are prepared from mineral oil to which are added paraffin or ceresine or potassium castor oil soap.

In making the first type, one first prepares the perfumed alcohol by adding 50-150 gr. of perfume to 1 litre of 90-95% alcohol.

1. Petrolatum or Benzoinated Olive Oil	1,000 cc.
Perfumed Alcohol	350-650 "
2. Peach Kernel Oil	700 "
Perfumed Alcohol	300 "
3. Mineral Oil	550 "
Castor Oil	150 "
Perfumed Alcohol	300 "

Second Type:

1. Castor Oil	120 cc.
Alcohol Extra	1,000 "
Floral Tinctures	80 "
Perfume as desired	15-40 "
2. Glycerine Extra	300 "
Castor Oil Extra	100 "
Perfumed Alcohol	800 "
95% Alcohol	800 "
3. Glycerine Extra	600 "
Perfumed Alcohol	600 "
95% Alcohol	8,000 "

Third Type:

1. White Petrolatum or Mineral Oil	925 gr.
White Paraffin or Ceresine	75 "
Perfume according to choice	5-15 "

2. A perfumed castor oil soap made by warming castor oil on the H 20 with 1/10 its weight of KDH. (Pot. Hydroxide).

3. Mineral Oil	760 gr.
Palmitin from (beef) fat	45 "
Cocoa Butter	90 "

Above are melted, a mixture of 90 gr. mineral oil and 15 gr. caustic potash added, the whole agitated continually. On cooling, a transparent jelly is produced. (Concentration of caustic potash not given. Apparently a potassium palmitate is desired for the effect. The transparent jelly looks interesting. Abstractor).

4. C. P. Glycerine	800 cc.
H 20 Distilled	200 "
Clear gelatine	20 "
40% Formaldehyle	2 "

The above, (4), is also a jelly.

Bandolines:

1. Powdered Tragacanth	40 gr.
Powdered Borax	64 "
Rosewater	800 "
Rose Perfume	2-5 "
2. Tragacanth	30 gr.
Rose Water	750 "
95% Alcohol	40 "
Perfume	2-5 cc.

3. Macerate quince seed in 5 times its weight of water, squeeze out the jelly through a fine cloth, add the perfume made by dissolving 5-15 grams of perfume in 1 litre of alcohol; preserve with 2-2 gr. commercial formaldehyde. Exact quantities for this preparation are not stated by Karaivanoff but a 2-3% solution of quince jelly is of sufficient thickness for practical purposes. Abstractor Gum tragacanth can also be added to the quince jelly to make it heavier.

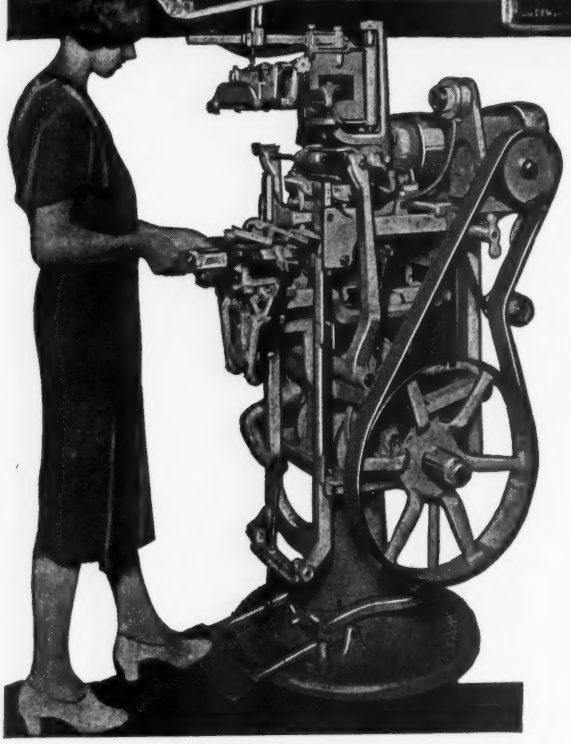
4. Boil 35 gr. of moss (Irish or Iceland, presumably) in 1 litre of H20, till completely dissolved, then proceed as for the quince seed gel.

New German Medicinals

Novutex is an "autogenous sterile" local anaesthetic. The preparation contains novocain substitute with adrenalin substitute and 1:80,000 vucinotoxin as well as 0.2 per cent of benzoic acid which is used for maintaining the preparation sterils. It is manufactured by the Chemiache Werke vormals H. and E. Albert, Wiesbaden-Biebrich, Germany.

Orthosichol is the name given to extract obtained from orthosiphon stamineus Benth. It is a specific remedy in the treatment of diseases of the gall bladder. It is manufactured by Dr. Degen & Kuth, Dueren, Rheinland, Germany.

Sulphanthrene salves are made by the Alpinen Chemischen A. G., Kufstein, Germany. These salves have the composition of an old French medicament, whose active ingredients are tar, sulfur and camphor. The preparation of this salve in the proper physical condition is quite a difficult matter, due to the difficulty of obtaining a uniform distribution of the sulfur and tar. Thus in the preparation of sulphanthrene salves the sulfur is blown into the heated tar and in this manner the sulfur dissolves in the tar.



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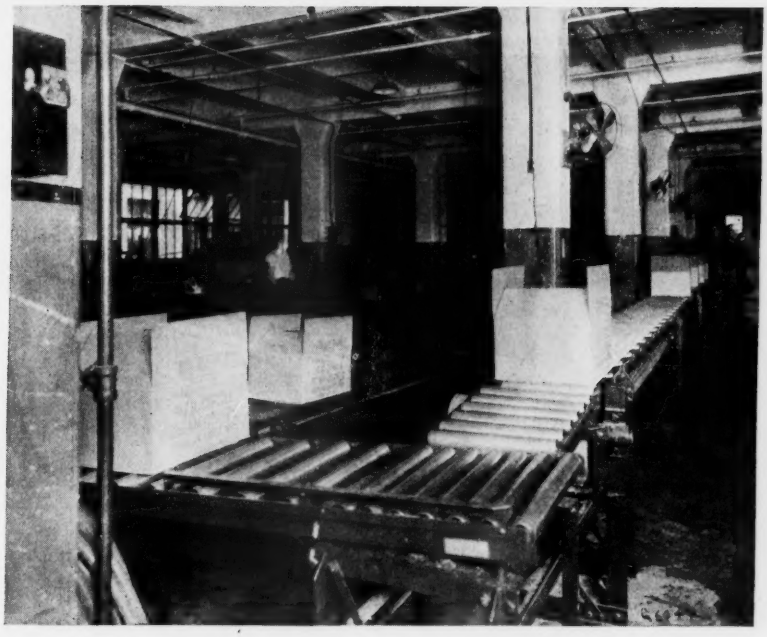

Layout in manufacturing plant showing a belt conveyor feeding to a roller conveyor and then to an automatic sealing machine

Handling Materials

By Francis Chilson

Much unnecessary labor is expended in handling materials between actual manufacturing operations. Mr. Chilson suggests how the handling costs can be lowered.

IN CONSIDERATION of the fact that the first Material Handling Show will be held next month at the Grand Central Palace, a discussion of the handling problems peculiar to the drug and allied trades is opportune.

So much emphasis has been placed on production machines that the importance of auxiliary handling equipment is not always fully appreciated. Whenever a scientific plant layout is made, it is the economical handling of materials between operations that very largely governs the arrangement of machines. Yet, even in a plant whose machines are well laid out—with efficient equipment installed for conveying materials between operations—one will find that the handling of incoming raw and finishing materials, the handling of raw materials in compounding, and the handling of outgoing finished stock is comparatively inefficient and expensive. But, because the cost of handling materials rarely stands out as a separate item in the factory operating expense report, its importance is not observed, and, in consequence, this phase of manufacturing receives scant attention. The average manufacturer thinks his handling costs are limited to the ways of a receiving clerk, a couple of warehousemen and a few general handlers in the factory itself. In order to determine true handling costs, however, other intangible and not easily measured factors must be evaluated and added to the prime cost of handling materials. The compounding of batches is often delayed and lengthened considerably because of inconvenient location of storerooms and cumbersome methods of transporting raw materials. Machines are frequently held up while waiting for packaging materials to be brought to them. Productive workers are very often compelled to stop work to aid in the handling of materials owing to lack of proper handling methods and equipment.

In large organizations, producing great quantities of a small number of different products, the problem of

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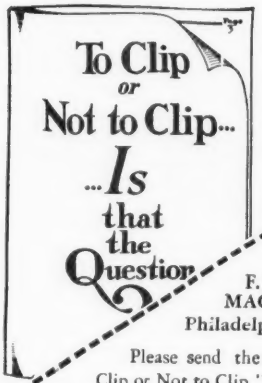

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handling material is very simple. Usually such factories have their own railroad sidings and are equipped throughout with conveying systems and mechanical devices for transporting both incoming and outgoing materials. The cost of handling in an organization of this size will be only a small part of what it costs to handle less material in a factory doing only a tenth of the volume, but turning out a varied line and transporting materials on hand trucks.

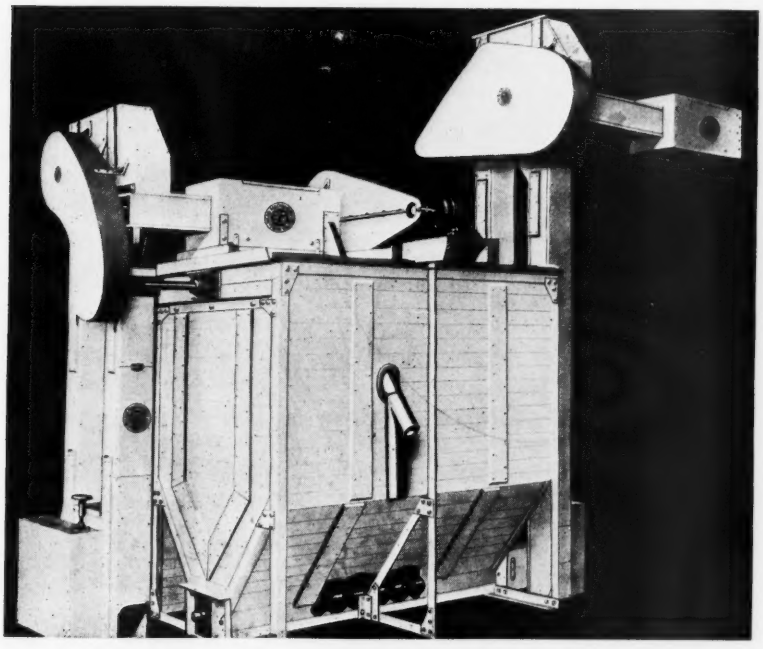
There is little question but that the more varied a manufacturer's line, the more complicated and proportionately expensive will his handling problem be. In many such organizations, incoming materials are usually loaded on wheel trucks, hauled to the warehouse, unloaded and stacked. Subsequently, when the materials are wanted, they are loaded from the stacks to wheel trucks again and transported to the manufacturing or packaging floor. This procedure is not very efficient. Regardless of their inefficientcy for handling heavy, incoming materials, wheel trucks have their proper place in every well equipped factory as we shall presently show.

To save rehandling many manufacturers have adopted the skid and lift truck method. For handling heavy cases, like those containing glass bottles, it is difficult—short of conveyor systems—to handle materials more economically than by using skids and lift trucks. Lift trucks save stacking and reloading; and, because of the inmechanical construction, enable a warehouseman to haul several times the weight that he could haul on a wheel truck. When the load has been hauled to its place in the warehouse, it is dropped and allowed to remain there until wanted, at which time it is again picked up and taken to the factory floor.

It often happens, however, that a manufacturer in his enthusiasm for lift trucks will attempt to employ them for handling all kinds of materials and will in consequence dispose of his wheel trucks. This is a mistake. Lift trucks are designed for full, heavy loads. If the materials are to remain in the warehouse for sometime, the skid should be filled to capacity. Otherwise the space taken up in the warehouse by the skid is too great and nullifies the economy made in eliminating stacking. Drug manufacturers often receive light raw and finishing materials which require but comparatively little space. For transporting these, wheel trucks are best because they are less cumbersome and may be moved more rapidly than lift trucks.

As a general rule wheel trucks are, because more easily manoeuvered, better for handling finished stock from the finishing floor to the stock room, especially in those factories producing many dissimilar products which have to be stored in bins. Wheel trucks, being narrower and less cumbersome than lift trucks, may be more easily handled in busy aisles on the packaging floor and also in the narrow ones of the stock room.

When the stock room is on a level with the packaging department, lift truck stock bins may be used to advantage particularly for fast selling items. These are ordinary steel bins built on skids with the opening on the long side of the skid. The bins are loaded at the end of the packaging line, picked up with a lift truck hauled to the stock room and dropped in their proper places. They may be built to a height of seven feet without fear of tipping over in hauling. When they are used it is a good idea to utilize the space above them in the stock room—if there is any—by building in stationary bins for slow moving stock and for items received from the outside such as rouges, etc. The



Bucket elevator and sifters located in a drug manufacturing plant

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use of portable bins have an added advantage in that they insure the maintenance of fresh stocks; the stock clerk is prevented from stacking a load of fresh goods into a bin in front of stock that may have been on hand for several weeks or even months. Naturally, the entire portable bin must be filled with one item; if two are put into it and one runs out of stock first the nearly empty bin will be held until the second item has been exhausted.

Commonly the cost of handling material is considered to have ended at the stock-room door; it really ends only when the outgoing packed cases have been loaded on a delivery truck. The necessity for handling and rehandling plays a very important part in the operation of the stock room and has a direct bearing on the cost of running this department. The conscientious stock clerk will, perhaps, do more rehandling than another because he will be careful to remove old stock and to place it in front of the new. The careless stock clerk will simply load the new material into the partly empty bin and let it go at that.

This rehandling can be entirely eliminated, even when it is necessary to use stationary bins, by constructing the bins properly. Most stock bins are too deep, with the result that the clerk in laying up orders will use from the front of it first. Stock bins should be wide rather than deep. About thirty inches should be maximum depth. This will make it convenient for the stock clerk to work straight to the back of the bin along one side. In this way new stock is filled into the empty space and the stock clerk can continue to use the old stock without having to rehandle any of it.

Proper layout aids in decreasing the cost of handling stock in the stock room. Invariably, the packing table is placed along the end of the bins. This saves space somewhat but it creates very long aisles and places the best selling items (which should be right under the stock clerk's hand regardless of where he is laying up an order) in more or less inaccessible places. The rows should be parallel with the packing table, with all the best sellers in the bins facing the table. In this way the stock clerk can put up the bulk of his orders without moving out of the first aisle.

A roller bearing wheel truck capable of turning in its own space is necessary in a stock room to facilitate the laying up of large orders. This can be moved from aisle to aisle very rapidly and saves many steps.

To return to raw materials: One very often sees a laborer rolling barrels or drums of petrolatum, oil, zinc oxide or other raw materials for want of a barrel truck. These trucks are so designed as to eliminate the need for tilting the barrel forward in order to slide the foot of a hand truck under it; all that need be done is place the truck in position, drop the hook or hoop holder over the head of the barrel and pull back. Pony mixer tanks are usually hauled on wheel trucks. A special pony mixer tank truck is more convenient and permits more rapid handling.

One often sees sifters operated without a bucket elevator feed—a man being designated to go into the sifter room every now and again to load them.

In many very large companies one will find batches of face powder being compounded by hauling the materials out of the stock room in small portable bins or even in barrels. When production is large enough it is possible to install tiers of raw material bins and to compound the batches progressively by means of a traveling batch scale on a monorail system. These units sound formidable but are also built in small sizes suitable for the needs of the medium sized manufacturer.

A great deal of space is wasted in the storage of raw materials in drums and in barrels because of the lack of a tiering rack and a portable elevator to allow tiering them. These portable elevators are useful for a great many purposes in addition to the one cited. They may be used for stacking loaded lift truck skids one upon the other. This may of course necessitate a special tiering rack also. But cased materials like glass containers are strong enough to allow stacking upon each other. Very frequently, indeed, portable elevators can be used for general utility purposes in lifting heavy cases from the sidewalk to delivery trucks, and for other purposes requiring a hoist.

Efficient conveyor systems for handling material between operations have been developed by the machinery companies and are so universally used that comment on them would be superfluous.

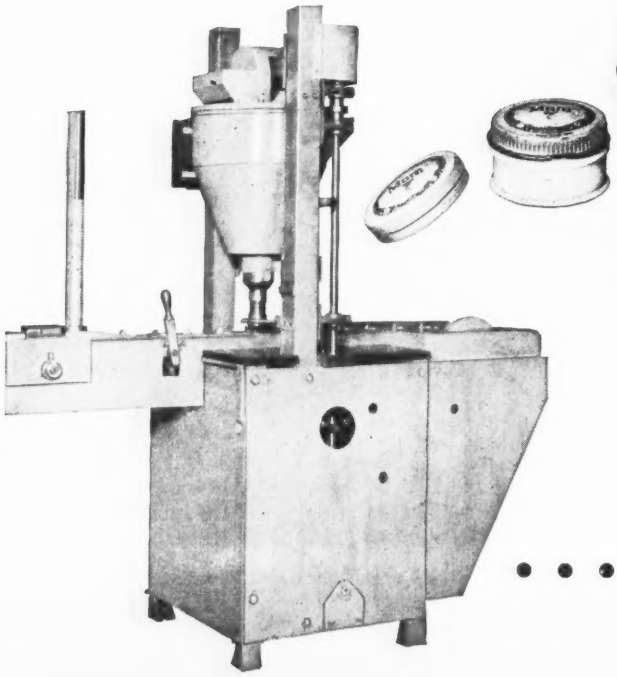
In the planning of conveyor systems between floors extreme care must be taken beforehand to insure that the volume to be handled warrants the investment. As an instance of bad judgment in designing conveying equipment the experience of a prominent house may be quoted.

It was decided by this firm that it would be economical to deliver finished goods continuously into the stock room as it came off the production lines. To achieve this a tray lowerator was installed to carry the packages down to the stock room. Feeding this was an overhead conveyor, which in turn was loaded from four production lines by means of pony conveyors pitched at an angle of about forty-five degrees. The packages when finished were cased in chipboard or corrugated and carried up the ponies to the cross conveyor, which carried them to and dumped them on the lowerator.

In operation several things happened which eventually compelled the dismantling of the whole system. The four production lines were delivering different products, the units of which, in some cases, were extremely light and in others heavy. The result was that the heavy packages struck the light ones when the cross conveyor dumped them on the pans of the lowerator with the consequence that the light packages were smashed. Since the different production lines operated at different speeds, and since some of them were nearer the lowerator than others it was

(Continued on page 401)

When "Mum" Goes Into Jars



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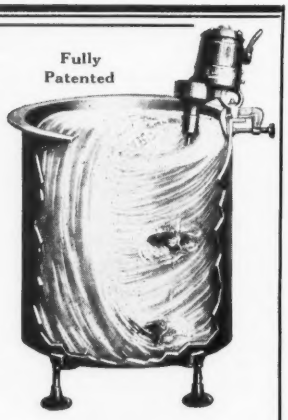

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NEW YORK CITY

For Plant Managers

By Francis Chilson

A Central Repair and Maintenance Service

There ought to be in New York, the center of so many packaging industries, an organization specializing in the repair, maintenance and installation of packaging machinery of all kinds. Nearly every firm of any size is compelled to maintain an expensive repair and maintenance department. The cost of operating such a department ranges from ten to twenty-five thousand dollars a year even in the relatively small concerns. In larger ones this sum runs up to a very large amount. Very few of these firms know the real cost of operating a repair and maintenance department because they usually consider only the salaries of two or three mechanics; the rest of the charges are buried in general factory overhead. To determine the true cost of operating such a department an account for it should be set up and charged with labor, depreciation on lathes and other necessary tools, power, lights and gas, insurance, rental for space occupied by machine shop, purchases of metal, lumber, small tools and other supplies.

Speaking from personal experience we believe that such departments are usually operated at a loss as gauged by the service they render.

In addition to a repair and maintenance service, a central organization could develop special small tools and equipment, which could not be built by machinery makers because peculiar to a single plant alone and offering no possibility of marketing on a profitable scale, and which, because of limited volume, would not warrant the attention of one of the large special machine builders. Every plant regardless of size has special problems peculiar to it alone. These problems are often handled by makeshift means; often they are experimented upon by inexperienced and incompetent maintenance mechanics, with the result that the total cost of a special development—if it could actually be determined—usually amounts to a very large figure.

A central organization such as we have in mind would have to be manned, of course, by experienced packaging machinery engineers and mechanics, recruited possibly from the machinery makers organizations or from the very large manufacturing companies. It would have to function somewhat along the lines of the Maintenance Company which caters to the electrical industry, and is prepared to render twenty-four hour emergency service. The service rendered would cover regular maintenance, repairs, emergency breakdown service, installation of machinery (particularly after plant removals and new layouts), development of special tools and accessories etc. In other words such an organization must render a service equal to that rendered by a company's own repair and maintenance department with the assistance of the machinery builders service departments. Of course such an organization could not eliminate all mechanics from the plants of its patrons; it would eliminate only the expensive ones—a helper for set up and general work would be needed for constant attendance on the machines.

Another feature of the work of such an organization would be the installation of new machinery. Many machine builders are located out of town and, when new machines are sold, are compelled to send mechanics, pay bonuses, traveling expenses and hotel bills. Sometimes the machines require adjustment after installation, and the mechanics must remain, sometimes for one or two weeks, until the machine is in operating order. This service could be handled by a well organized central service and charged to each machinery builder on a flat fee basis.

It would be interesting to have the reactions of both machinery builders and plant managers to the foregoing possibility.

Adjustability of Filling Machines

We have been asked by the editor of a contemporary journal to give our opinion of the practical range of adjustability of filling machines. This varies with the type and design of the machine. Some makers claim an almost unlimited range; other claim that the greater the range of adjustability the greater the error in the fill. This seems to us to be the practical position at present. But it is regretable that very wide adjustability and wide adaptibility are not usually incorporated in the same machine, because there are a very great number of small and medium size manufacturers who fill entirely by hand or use a machine for some products and hand methods for others. In such organizations—if all the products and all the containers could be filled on a single machine, packaging costs would be lowered considerably. We do not wish to convey the impression that a single machine should ever be used for a number of products when there is sufficient volume of one or two similar ones. Far from it. Cleaning and setting up the machine takes too long. What can be accomplished, however, when an adaptable machine is available, can be illustrated from the writer's personal experience. Confronted with the necessity of turning out a large quantity of light mineral oil during a rush season, when all the lotion equipment was occupied, the writer diverted the batch to the cream department and filled the oil on a well-known filler which was being used for heavier products. Although our associates were skeptical about the success of the experiment because the oil was so extremely light, and the bottles small, the filling turned out to be uniform and clean—the dripping that everyone expected did not occur. Maybe it was just luck but we don't think so. Incidentally, it may be well to mention in passing, that we have filled with a hand vaccum filler containers ranging from one-half ounce to one gallon with liquids varying from alcohol to heavy quince seed emulsions. This seems to be a rather wide range of adjustability as to container size; and also adaptability to a wide range of viscosity.

Bottle Cleaning Precautions

One of the things to be guarded against in buying bottle washing equipment for narrow mouthed ware is the danger, arising from faulty design, of the water baffling in the necks of the bottles instead of going into them. What happens when water is baffled by narrow mouthed ware can be illustrated by holding a small necked bottle under a fast stream of water. It will be observed that the outside of the container will be washed thoroughly but very little of the water will go into the bottle.

Speaking of Bottle Washing

A plant manager of our acquaintance wondered why the production of washed bottles from his washing room was so low. Upon looking into it he discovered that the old rinsers he had been using had not been overhauled since they were purchased, and when the hood was re-

"I am intended for fastidious women"

says this LUX package

Lux Toilet Soap is a good example of a fine-looking, sales-winning package, produced economically at *high speed*.

The wrapping on this popular toilet soap is so smooth and neat that one cannot help but feel that here indeed is perfection expressed in soap.

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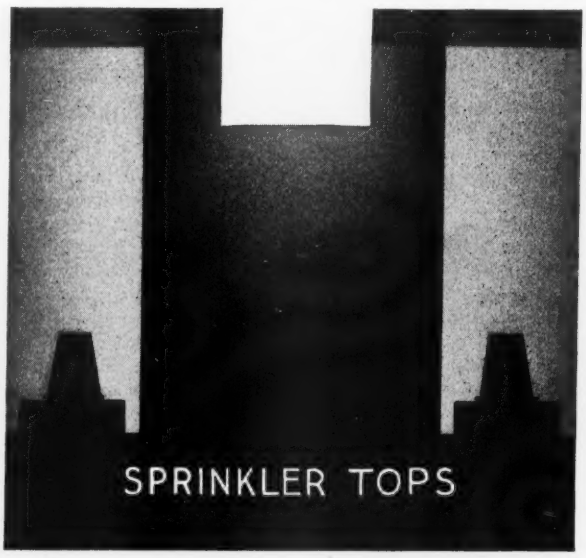
yes sir . . 1931 is going to be . . another record-breaking year . . for us . . thanks to our customers . . whose goodwill . . and confidence in us . . make our hard work . . seem easy . . easy . .



moved, a quarter of the jets were discovered moved, a quarter of the jets were discovered to be out of order—either plugged or broken. Repairs and maintenance again!

Breakdown of Emulsions in Filling

Certain types of liquid emulsions cannot be filled by vacuum due to separation or "breaking down". This is no fault of the filler; it is due to the composition of the emulsion. What happens is that the emulsion is separated by friction. One of the causes of this is that the formula is made up of heavy materials dispersed in liquid. The molecules of the emulsion are not homogenous. Sometimes such emulsions can be stabilized by employing a homogenizer or a colloid mill. When their nature is such that they cannot be stabilized by mechanical or by chemical means there is no recourse but to use some other type of filer.

A New Economic Index

To the science of economics we have added a new index, namely the number of pages in the Saturday Evening Post. A few weeks ago the Post was down to 58; it rose the following week to 130; then to 160. Accordingly we predict that prosperity is en route incognito. When Timken begins to advertise freight car bearings, and U. S. Steel, horseshoes we shall know that prosperity is upon us again.

Responses to Inquiries

Paris Hair Co., Cedar Rapids, Ia. writes to ask the kind of water used in emulsified ointments: distilled water; regular city water; clarified water or softened water. There is some confusion of terms here. City water is always clarified—by which we presume is meant filtering—and it may be either hard or soft depending upon location. If we remember correctly Cedar Rapids is in the hard water belt and the safest procedure is to distill all water used in the ointments whatever kind they may be. Some localities are blessed with a water supply so soft and pure that it may be used with impunity for almost everything without distillation, but these are few and far between. If there is doubt distill your water. You can obtain a water analysis from the local water supply company or municipal department. This will be the best guide.

Fever Sores

We wish some enterprising drug manufacturer would develop an ointment for fever or cold sores. He would make a fortune in the summer when such sores result from chapped and sunburned lips. The writer is cursed with them, acquiring a chinful about three times a year. Salt water seems to have something to do with them as quite a number of cases were noted on the beach this summer.

New Catalogues

Burt Machine Company, Baltimore, Md. has issued a bulletin describing and illustrating the new Burt Straight Line Labeling Machine. This machine applies labels to flat and semi-circular surfaces at speeds ranging from sixty to one hundred and twenty per minute depending upon the type of machine. In this machine the gum is applied to the container; the container moves to the next station where a label is applied; then it moves again and at the next station pressure is applied and the label smoothed firmly in place. In this manner three different operations are being performed on three different containers simultaneously. This labeler can be obtained in a single type model for an output of 60 per minute; a duplex model for 120; and a double type, which applies two labels front and back. The latter machine can be obtained at speeds of either sixty or one hundred and twenty as required. All the machines are adjustable for different size containers and labels within a definite range.

"Design in Industry"

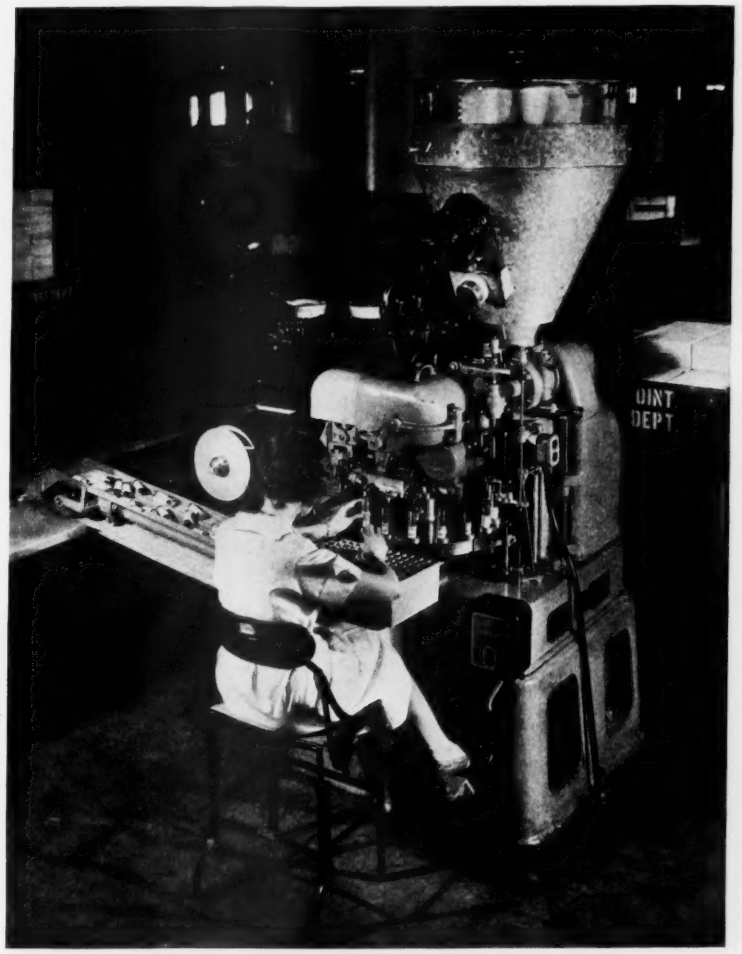
The Newark Museum, Newark, N. J., has announced that it has been found necessary to charge a subscription price of one dollar per year for "Design in Industry", the monthly bulletin annotating the current literature on industrial design which is sponsored jointly by the Newark Public Library and the Newark Museum.

Patterson Foundry Office

Patterson Foundry & Machine Co., East Liverpool, Ohio, grinding machinery, has announced the opening of a San Francisco office in the Rialto building, with Edgar S. Browning in charge as district manager.

New Installations

Eli Lilly & Co., Indianapolis, has recently installed the tube filling machine shown here which was made for the company by F. J. Stokes Machine Co., Philadelphia. The new installation can be used for filling a wide variety of ointments, salves, pastes, creams, etc., into tubes from 1½ up to 7 inches; has a capacity of 140 gross per 8-hour day; makes and attaches its own clips; stops automatically when no tube is in the filling position.



New installation in Eli Lilly & Co. plant

Be a Pioneer

In these days there's not much glory and very little profit in simply bringing out "another" item or line.

The big breaks in business go to those who *originate new products* and who *create new consumers.*

Break open new country and know the satisfaction of doing what hasn't been done before.

There's room for proprietary remedies, for cosmetics, for food specialties and many other articles; but only if they are intelligently conceived and executed. There must be real merchandising sense in back of them.

From time to time we have been in a position to consult with manufacturers and plan with them. The results have been consistently good. While we are not merchandising or advertising counsellors, yet we are often able to help considerably in those directions.

And as for perfuming and flavoring—there we bow to no one. After all, they are our *business.* We manufacture or import the raw materials and make the finished products that are used to *flavor or scent* household products, food products, soaps, perfumes, cosmetics and all kinds of industrial materials. Can we help you?

van Ameringen-Haebler, Inc.

Manufacturers and Importers of

Aromatic Essentials

315 FOURTH AVENUE, NEW YORK

180 North Wacker Drive, Chicago 619 Clark Avenue, St. Louis 42 Wellington Street, E., Toronto

Factory, Elizabeth, N. J.

News

Regulatory

Campbell Drops Stipulations

The Federal Food and Drug Administration has announced that it will no longer accept stipulations from drug manufacturers whose products are under investigation for misbranding under the provisions of the Food and Drugs Act. The new procedure which has been adopted is to refer the manufacture to the solicitor of the Department of Agriculture when the manufacturer calls to confer concerning the label or labels against which action has been taken. After discussing the matter with the manufacturer, the legal staff of the department will either refer him back to the administrative officials for a conference or the manufacturer will have to go through with the court proceedings.

Drug Control Fills Vacancies

Dr. N. O. Tribble, Atlantic, and Dr. Virgil McDaniel, Seattle, have been appointed to fill vacancies in the Drug Control Unit, Federal Food and Drug Administration caused by the recent resignation of Dr. J. J. Durrett and Dr. G. E. Clarke.

B. & M. Case Developments

F. E. Rollins Co., Boston, "B. & M.," has filed a petition with the Supreme Court of the District of Columbia for an injunction to restrain the Federal Food and Drug Administration from making further seizures of "B. & M." until libel action on one seizure has been completed in some Federal court. The Department of Agriculture has made several seizures of this product in different Federal court districts and has instituted libel proceedings for confiscation of the goods on the ground that they are misbranded. The company claims that the department is without authority to interfere in its business to the extent of seizing its product wherever found, unless and until some court has held the goods to be in violation of the act.

Dunbar Objects to "Health"

Dr. P. B. Dunbar, assistant chief, Federal Food and Drug Administration, issued a statement, September 20, warning against injudicious use of the word "health" in the labeling of products like bread, breakfast foods and other bakery products. Said Dr. Dunbar, "such products are not medicines . . . unless the goods can be actually relied upon to restore or maintain health the use of the word, health, . . . or the use of similar expressions on the labels constitutes misbranding.

Raladam Case Cited

Federal Trade Commission has announced that trade practice rules of the solvents industry have been given final approval of the industry. A P. S. to the Commission's statement to the solvents group reads as follows: "P. S. Attention is called to Federal Trade Commission v. Raladam Company, decided May 25, 1931, in which the Supreme Court of the United States has apparently held that in order for a practice to constitute an unfair method of competition it must be shown to have the tendency to injuriously affect the business of competitors."

F. T. C. Will Publicize Violators

The Federal Trade Commission has announced that it will make public the names of firms which, after signing agreements to cease and desist from certain illegal practices, do not conform with the provisions of the agreement. Hereafter, the names of persistent and repeated offenders will be made public.

Government Pharmacologist

U. S. Civil Service Commission announces an open competitive examination for the position of pharmacologist in the National Institute of Health, Public Health Service, Washington, which position carries an entrance salary of $4,000 per year. Applications must be on file with the U. S. Civil Service Commission at Washington, D. C., not later than November 3, 1931.

Lysol and Iodine Sale

Lysol and iodine, if considered as poisons within the meaning of statutory provisions defining a poison as a chemical or preparation "liable to be destructive to adult human life in quantities of 60 grains or less," may not be sold, even in the manufacturer's original packages, in the State of Washington by licensed shopkeepers but only by licensed pharmacists or in stores in which a licensed pharmacist is in charge, according to an opinion of Lester T. Parker, Assistant Attorney General.

Court Decisions

Supreme Court decisions of interest to the drug industry were the following:

Indiana chain store tax—The plea to the Supreme Court of the United States to rehear the case in which the Indiana chain store tax was held valid by a five to four decision was denied by the Court on October 12 without opinion.

Raladam Case—The motion of the Federal Trade Commission that the Supreme Court modify its judgment in the Raladam case, in which it was held that the Commission does not have the authority in the absence of unfair competition to prohibit advertising and sale of products thought not to be in the public interest, was denied by the Court on October 12, without prejudice to application to the circuit court of appeals for similar relief.

U. S. P. XI Texts

Sixteen texts reported by the sub-committee on inorganic chemicals, U. S. P. XI Revision Committee are now available according to E. Fullerton Cook, chairman of the Revision Committee. The texts, which are subject to criticism and further revision are: Arsenic Test, Phosphoric Acid, Diluted Phosphoric Acid, Diluted Hydriodic Acid, Boric Acid, Sodium Borate, Zinc Acetate, Zinc Sulfate, Zinc Chloride, Zinc Stearate, Zinc Oxide, Nitric Acid, Sulfuric Acid, Diluted Sulfuric Acid, Hydrochloric Acid and Diluted Hydrochloric Acid.

Ergot Standard Improvement

Dr. E. E. Nelson, associate at the University of Michigan of Dr. Edmunds, Chairman of the U. S. P. XI sub-committee on Bio-assays, has personally visited the laboratories of many scientists who are now assaying ergot both in the interest of governmental, manufacturers' and private work. Dr. Nelson has observed

E. Fullerton Cook

the exact technique and end reactions of the operators, which information is to be used by the U. S. P. XI Revision Committee in formation of the new ergot monograph.

Dr. E. Fullerton Cook, Chairman of Revision U. S. P. XI, is quite optomistic regarding the new monograph, saying:

"Studies seem to have progressed to a point which promises definite improvement in the assay and preservation of the (ergot) products recognized by the U. S. P., and in consideration of the therapeutic importance of ergot, the Committee of Revision is taking the necessary steps to

CRYSALBA

THE NEW DENTIFRICE BASE

—is approved

by the Advertising Department as well as the Laboratory and the Plant

OUT of the ten points of superiority listed to the right, the advertising department can find a copy-theme which will freshen up your campaign.

Get the generous sample, which we will gladly send on request—and check it in your own formula—or in a new formula which we will gladly help you work out.

Study these points of superiority:

1. Will not harden in tube
2. Equally satisfactory in both acid and alkaline tooth pastes
3. Tasteless, odorless—insoluble in ingredients commonly used in tooth paste manufacture
4. Low absorption of elixir
5. Uniformly white; uniform in purity; crystalline structure and absorption
6. Softer than the enamel of the teeth, yet highly effective as a polishing agent
7. About 99% will pass thru a 400-mesh screen
8. Inert, neutral and physiologically harmless
9. Contains no free lime
10. Free from arsenic, lead or other poisonous metals or their salts

THE ILIFF-BRUFF CHEMICAL COMPANY

Hoopeston, Illinois **DENTIFRICE DIVISION**

SWANN TCP Of uniform polishing power, which can be varied to your needs. Constant, uniform purity. Gives a creamy white paste of high effectiveness in acid or alkaline formulae.

PYRAN Patented. Designed to remove mucin placque without injury to enamel, dentin or gingival margins. Helps create proper mouth conditions. Equally useful in acid or alkaline pastes.

THE SWANN CORPORATION
BIRMINGHAM
NEW YORK ST. LOUIS
CINCINNATI

WORLD'S LARGEST DENTIFRICE BASE PRODUCERS

determine the proper course. . . .Questions so complex as ergot, involving methods of assay and the maintenance of activity in its preparations, make difficult the attainment of the ideal of supplying the patient and the doctor with uniformly potent products, but splendid researches in this field during the past five years, give promise of success even with so difficult a drug."

A. M. A. Accepts

SKIODAN

Skiodan, manufactured by the Bayer Co., Inc., Rensselaer, N. Y., distributed by Winthrop Chemical Co., New York. The sodium salt of mono-iodo-methanesulfonic acid. Contains 52 per cent. iodine. Proposed as a therapeutically indifferent medium for roentgenography. White, crystalline, odorless powder, slight saline taste, sweetish after-taste, Soluble in ethyl alcohol, practically insoluble in acetone, benzone and ether. Decomposes and turns yellow upon exposure to light.

GYNERGEN

Gynergen (N. N. R., 1931, p. 183). Gynergen Solution 0.1 per cent.: each cubic centimeter of solution contains 1 mg. of gynergen and a small excess of tartaric acid.

VITAVOSE

Squibb's Vitavose (N. N. R., 1931, p. 245). Squibb Chocolate Vitavose: A mixture of Squibb's vitavose, 30 per cent, with cocoa, milk solids and sucrose.

SQUIBB'S PETROLATUM

Liquid Petrolatum (N. N. R., 1931, p. 235). Squibb Liquid Petrolatum with Agar and Phenolphthalein.

LEDERLE'S LIVER

Solution Liver Extract Parenteral-Lederle. Manufactured by Lederle Laboratories, Inc., Pearl River, N. Y. Marketed in ampules each containing material from 100 gm. of liver. Proposed for intramuscular or intravenous injection in treatment of pernicious anemia.

A. M. A. Rejects

OLAGEN

Olagen, marketed by Olajen, Inc., New York. Because it is a needlessly complex and unscientific mixture of inadequate dosage, marketed with unwarranted therapeutic claims under a non-descriptive title.

NORMALINE

Normaline, Norman C. Hayner Co. Because it is an unoriginal preparation of formaldehyde and zinc chloride marketed under a noninforming name without a quantitative statement and with claims that are unwarranted and misleading.

PANTOPON

Pantopon-Roche, Hoffmann-La Roche, Inc. Because it fails to appraise the physician of the identity of the product, namely that it is a mixture of the hydrochlorides of opium alkaloids, containing 50 per cent. of anhydrous morphine hydrochloride.

PERNOCTON

Pernocton, Riedel-de Haen, Inc. Because of lack of critical evidence that routine intravenous injection of potent narcotics is desirable or safe.

LACTO-KELPOL

Lacto-Kelpol, Kelp-Ol Laboratories, Inc., Los Angeles. Because no satisfactory supporting evidence for the claim that lactic acid contained in "Lacto-Kelpol" behaves differently from a dilute solution of lactic acid.

Nicaragua Ruling

Nicaragua has ruled that it is no longer necessary to print on the package the date and number of registration of pharmaceutical preparations with the General Direction of Health. Henceforth it will suffice if this information is indicated upon the invoice accompanying each shipment to Nicaragua.

People

La Wall on Drugs

Dr. Charles H. La Wall, dean, Philadelphia College of Pharmacy and Science; secretary, U. S. P. XI Revision Committee; and recently appointed United States representative on the League of Nations International Committee for assaying opium; was the subject of a recent interview in the Philadelphia Public Ledger on drugs and pharmacy. Speaking of drug standardization, Dr. La Wall said that "The first step was made in 1902, when an international conference of all principal nations was held in Brussels. At that conference representatives of various nations agreed that all drugs, capable of standardization, should be standardized and that medicines made from powerful drugs should be of the same strength in all nations." He said that aconitine is probably the most powerful drug dispensed by pharmacists, its average dose being one four-hundredth of a grain; that the weighing and handling of powerful drugs is a most important part of our medical life; that the pharmacist has grown to be a professional man of prominence.

McCormick and Unemployment

Willoughby M. McCormick, president, McCormick & Co., Inc., Baltimore, in a letter addressed to President Hoover, September 28, stated that "the simplest method of employing a number of these men (unemployed) would be to push certain of our needful public works." Reforestation, watersheds, and the Nicaragua Canal were specific public works referred to. "A public dole system or the continued activities of private charities will aggravate the situation by placing a premium upon idleness and dishonesty. The employment of our great national resources in public works will, on the other hand, give employment to those who really need it, both directly and indirectly by speeding up our industries."

Leigh Heads A. A. C. P.

Townes Randolph Leigh, head, department of chemistry, and Dean, College of Pharmacy, University of Florida, has been elected president, American Association of

T. R. Leigh

Colleges of Pharmacy for 1931-32. He has made many contributions to chemistry both in research and in the educational field, is a member of the U. S. P. Revision Committee XI, and national president of the honorary chemical fraternity, Gamma Sigma Epsilon.

P. E. Anderson Opens Office

Percy E. Anderson, for more than twenty-five years closely connected with the drug trade, has returned to business on his own account with offices at 90 John st., New York, where he will act as importer and exporter of crude drugs, essential oils and chemicals.

George Merck Fellowship

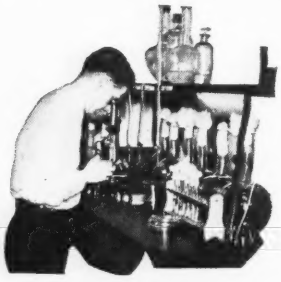
George Merck, president, Merck & Co., Rahway, N. J., has endowed a fellowship in alkaloid chemistry at the University of Virginia, Charlottesville. Chemical studies now being carried on at that university embrace a systematic chemical investigation of the natural and artificial alkaloids of opium, with the ultimate hope of developing non-habit-forming derivatives.

Merrell Advances Bowden

Grady E. Bowden, formerly middlewest and southwest sales representative, Wm. S. Merrell Co., Cincinnati, has been appointed supervisor of the company's Chicago sales division.

• U. S. INDUSTRIAL CHEMICAL CO. INC., A SUBSIDIARY •

• U. S. INDUSTRIAL CHEMICAL CO. INC., A SUBSIDIARY OF U. S. INDUSTRIAL ALCOHOL CO. •



U. S. I. A.'s
Service to Industry . . .

VALUE FAR BEYOND PRICE

THERE are many sources of supply available to manufacturers seeking specially denatured alcohol. We have no illusions about the fact that several plants distill an alcohol which even an experienced chemist couldn't tell from our own.

Yet, we are constantly winning new customers and entrenching our position with old patrons, for reasons beyond the fact that we supply honest merchandise at reasonable prices.

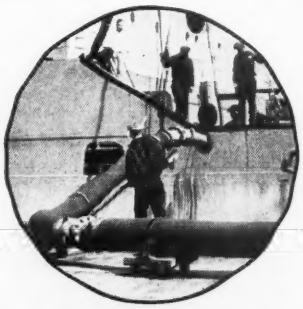
Our size and importance in the industry is one of the leading factors . . not interpreted in terms of stills, tanks or tonnage—but measured by the service and technical facilities we provide as part of our sales transaction.

Records of our company illustrate numberless instances where our resources have enabled us to render a definite service to American industry. Hardly a day passes without some new contribution from U. S. I. A. chemists to the scientific knowledge of modern industry.

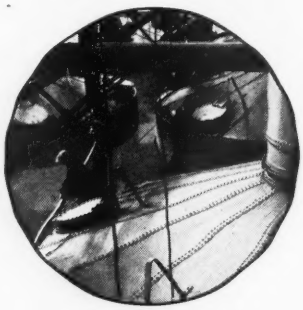
At the disposal of manufacturers is our corps of 40 engineers and chemists—a fully equipped plant for experimental manufacturing—a bureau for giving advice on permits, bonds, etc.—a chain of 28 warehouses located at industrial centers—and, a fine spirit of personal cooperation.

During periods of "fair weather sailing" many concerns deliver extra services not listed on the invoice . . but the U. S. Industrial Alcohol Co. has built its leadership and success upon the service it has rendered American business for more than a quarter of a century.

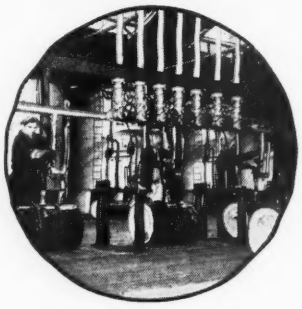
We would welcome the opportunity to serve you. The U. S. Industrial Alcohol Co., 60 East 42nd Street, New York, N. Y.



Molasses is pumped from steamers direct to six huge storage tanks.



New design fermenters have capacity of 130,000 gallons of mash each.



Automatic electric filling machines assure accurate, uniform measure.

28 CONVENIENT DISTRIBUTION POINTS

Manufacturing Plants

New Orleans	Newark	Baltimore
Buffalo	Anaheim	Peoria

Branch Sales Offices & Warehouses

Atlanta, Ga.; Baltimore, Md.; Boston, Mass.; Buffalo, N. Y.; Chicago, Ill.; Cincinnati O.; Cleveland, O.; Dallas, Tex.; Detroit, Mich.; Indianapolis, Ind.; Kansas City, Mo.; Los Angeles, Cal.; Louisville, Ky.; Memphis, Tenn.; New York, N. Y.; New Orleans, La.; Philadelphia, Pa.; Pittsburgh, Pa.; Portland, Ore.; St. Louis, Mo.; St. Paul, Minn.; San Francisco, Cal.; Seattle, Wash.

U. S. INDUSTRIAL ALCOHOL CO.

WORLD'S OLDEST AND LARGEST MANUFACTURER OF INDUSTRIAL ALCOHOL

All standard specially denatured alcohol formulae stocked at all warehouses

Makers of PYRO . . . the Standard Anti-freeze and general utility Denatured Alcohol

U. S. INDUSTRIAL ALCOHOL CO.

• U. S. INDUSTRIAL CHEMICAL CO. INC. •

• U. S. INDUSTRIAL CHEMICAL CO. INC., A SUBSIDIARY OF U. S. INDUSTRIAL ALCOHOL CO. •

Swedish Visitors

Boye Gabrielsson, managing director of Aktiebolaget Astra, the largest drug manufacturing and wholesaling house in Sweden, and Tore E. Norlander, chief engineer of the same company are now in this country arranging for exports to Sweden of medicinal chemicals, other raw materials, as well as machinery and equipment for drug manufacture.

Conditions in Sweden, according to Mr. Gabrielsson, are quite different in the drug trade than they are here. In that country there is not nearly so large a sale of packaged medicines, more pills and tablets being sold in bulk, and a far greater percentage of prescriptions being sold. All hospitals are owned by the government and these hospitals are required to use the official preparations rather than the specialties of manufacturers.

Many of the large American manufacturers are not represented in Sweden, although Parke, Davis & Co. does a large business there.

Lee Bristol to Serve

Lee H. Bristol, vice-president, Bristol-Myers Co., New York, has been appointed a divisional chairman of the commerce and industry division of the Emergency Unemployment Relief Committee of New York, and also has been commissioned a lieutenant-colonel in the Specialists Reserve Corps, U. S. A.

Eimer & Amend Honors Kuehnemann

Emil Kuehnemann, manager, wholesale drug department, Eimer & Amend, New York, was presented with a check for $5,000 by Otto P. Amend, president of the company, at a dinner held September 30, celebrating the completion of fifty years of service with Eimer & Amend. The company makes a practice of rewarding in this fashion those who attain the fifty-year mark. The dinner was attended by thirty other employees all of whom had been with the company for twenty-five years or more, and one of whom had received a check for $5,000 at a similar dinner held eight years ago.

Kimberly Donates

J. C. Kimberly, president, Kimberly Clark Corp., has presented the new Institute of Paper Chemistry, Lawrence College, Appleton, Wis., with a gift of $100,000 to be used for additions to its equipment.

L. W. Robinson Joins Merck

Lewis W. Robinson, formerly with the Powers-Weightman-Rosengarten Co., and the Grooner-Stewart Drug Co., has been added to the sales force of Merck & Co., New York, and assigned to the South Atlantic territory.

Peffer President Amer. Solvents

H. I. Peffer, chairman of the board, American Solvents & Chemical Corp., New York, has consolidated with the duties of that office those of president, succeeding V. M. O'Shaughnessy, resigned.

C. G. Merrell Honored

Charles G. Merrell, president, Wm. S. Merrell Co., Cincinnati, pharmaceuticals, has been made honorary secretary, Massachusetts Institute of Technology. He is a member of the class of 1884.

Dow Promotes Otterbein

Clemence H. Otterbein, for many years assistant superintendent, Dow Drug Co., Cincinnati has been made assistant to the president, D. C. Keller.

Rapin Returns

Louis Rapin, vice-president, Antoine Chiris Co., New York, has returned to this country after a visit to the company's home offices at Paris and Grasse, and plans an extensive business trip throughout this country.

Fritzsche Goes Back

Herman T. Fritzsche, director general, Schimmel & Co., Germany, has returned to that company after a short visit here during which he made his headquarters at the offices of Fritzsche Bros., Inc., New York, sole American agents for the Schimmel products.

J. A. Kelly Joins M. M. Harper

J. A. Kelly, one-time with Dorothy Gray, Houbigant, and Park & Tilford, has been appointed sales manager, Martha Matilda Harper, Inc., Rochester, N. Y.

Walgreen Advances Gile

O. G. Gile has been appointed manager, Indianapolis division, Walgreen Co., Chicago, succeeding C. L. Sorenson, who has been transferred to New York.

Dr. Weed Returns

Dr. Alfred Weed, entomologist, John Powell & Co., Inc., New York, has returned from an extensive trip which took him as far as the Pacific Coast and during which he conducted interesting survey and research work on both household and agricultural insecticides.

Fess Joins Alice Corry

Lowell Fess, formerly sales manager, Dorothy Gray, Inc., New York, has become associated with Alice Corry, Inc., Chicago, as department store contact manager.

Bradley Goes West

W. S. Bradley, manager of the National City, Calif., citrus oil factory of W. J. Bush & Co., New York, has returned to the West after several weeks' visit to the company's New York office.

Baum Made V. P.

S. Baum, New York manager, United Chemical & Drug Corp., Bridgeport, has been made a vice-president of the company.

Palmer's Home

Carleton H. Palmer, president, E. R. Squibb & Sons, has leased a furnished apartment at 455 East Fifty-seventh st., New York.

Litster With Hillier

K. I. Litster has been appointed Ontario sales representative, R. Hillier Son Corp., New York.

Ferris Leaves Alcohol Institute

Le Roy Ferris, formerly advertising manager, Industrial Alcohol Institute, has become vice-president of the Sacks Co., Inc., New York advertising agency.

Bonyun Buys Celma Co.

William Bonyun, formerly sales manager, Celma Co., Toledo, has purchased the entire stock of the company and is now president of the concern.

National Oil Engages Steik

Dr. Karl T. Steik, formerly with Standard Development Co., Elizabeth, N. J., and widely known for his research work in the chemistry of oils, has been appointed research director, National Oil Products Co., Harrison, N. J.

Sloan Quits Paterson, Boardman

Paterson, Boardman & Knapp, New York, has announced the resignation of Russell R. Sloan from its organization and the fact that R. del Cueto is now conducting the vanilla bean department.

Filler Machine Officers

Filler Machine Co., Philadelphia, has announced the election of the following officers: V. B. Salisbury, president; Blanche M. Geyer, vice-president; and John J. Coughlan, secretary and treasurer. The company has completed an addition to its facilities which will give it twice the former floor space.

Terri Cosmetics Appoints Richmond

Terri Cosmetics Corp., New York, has announced the appointment of H. P. Richmond, as director of sales promotion.

CHEMICAL
E. C. KLIPSTEIN AND SONS CO.
MANUFACTURERS
REG. U.S. PAT. OFF.

ALUMINUM CHLORIDE ANHYDROUS

HIGHER YIELDS, PURER PRODUCTS, CONSISTENT RESULTS are made possible with this exceptional catalyst.

Average analysis indicates 99.5 per cent anhydrous aluminum chloride, less than 0.05 per cent iron, and other metals entirely absent or negligible. It was developed especially for use in Ketone syntheses and other catalytic reactions. It has a uniformly high catalytic activity, and is available in graded sizes, including lumps, granules or powder, thus meeting specifically a wide range of requirements. Prompt shipment can be made in 100-pound drums or 500-pound drums, in quantities up to carloads.

A special pure white C. P. grade can also be supplied.

E. C. KLIPSTEIN & SONS CO., Inc.
CHEMICAL MANUFACTURERS
Sales Office
Empire State Bldg., New York City
Plant
South Charleston, W. Va.

Purity

The U. S. P. X. provides four safeguards for buyers of PETROLATUM LIQUIDUM. They are tests for ACID, ALKALI, SULPHUR COMPOUNDS and CARBONIZABLE substances. ALBINOL Genuine Imported Mineral Oil tests as follows:

ACID NEGATIVE

ALKALI NEGATIVE

SULPHUR COMPOUNDS NEGATIVE

CARBONIZABLE Substances PASSES GOOD

The latter test is probably the most *important.* The U. S. P. X. prescribes in the last named test that the C. P. Sulphuric Acid used in the test must not turn darker than "Pale Amber" and that the OIL remain unchanged in color.

In testing "ALBINOL" the C. P. Sulphuric Acid used does not even approach a "Pale Amber" and except for a "slight haze" *remains the same color as originally.* It is therefore **MUCH BETTER** than U. S. P. A comparative test against other oil is welcomed.

Schliemann Companies, Inc.
53 Park Place, New York, N. Y.

REFINERY IN HAMBURG, GERMANY

Companies

Monsanto Sues North

Monsanto Chemical Works, St. Louis, and the Rubber Service Laboratories Co., a subsidiary, have joined in filing a suit in the U. S. District Court at Charleston, W. Va., against Kavalco Products, Nitro, W. Va., and C. Olin North and Winfield Scott. Suit is for an injunction and accounting based upon defendant's alleged unlawful use of confidential manufacturing and sales information belonging to the plaintiff corporation.

The bill of complaint charges that North and Scott organized Kavalco (incorporated September 20, 1929) while still occupying positions of trust and confidence with Rubber Service, and that North secured release from his contract under misrepresentations and without intimating that he was then engaged in the formation of a competitive enterprise; that North enticed a number of experienced and valued employees of Rubber Service to enter the employ of Kavalco Products; that Kavalco commenced manufacture of phenolphthalein, triphenyl phosphate and tricresyl phosphate without the lapse of a sufficient period for the development of processes, etc.; that Kavalco is making use of confidential information of Rubber Service respecting the manufacture of these products, and that it is also making use of confidential sales information respecting Rubber Service's purchasers and customers, their particular specifications and selling prices; that all such confidential sales information was received by and accessible to North by reason of his being an officer and occupying a position of trust with Rubber Service, and that he is now making use of such information and soliciting and selling customers of the Rubber Service Laboratories Co.

In a public statement made following the filing of this suit and signed by C. O. North, president, Kavalco Products stated that "it is contended, among other things, that the technical men in our organization are not entitled to use their knowledge gained by experience and education in manufacturing chemicals. This is a principle which, if sustained, would deny all technical men the right to earn a livelihood . . . Quite happily the Courts have decided . . . that no such restraint can be placed upon individuals. In this particular case one of the officers of Kavalco Products agreed in a contract not to manufacture rubber accelerators or rubber anti-oxidants. He has kept this agreement."

J. & J. Handles Clapp Sales

Johnson & Johnson, Inc., New Brunswick, N. J., has taken over the exclusive sale of the products of H. H. Clapp, Inc., Rochester, N. Y., a subsidiary.

McK. & R. Sell Lucretia Vanderbilt

Grenoville, Inc., Paris, French perfume house, has formed an American subsidiary also known by that name, and acquired the Lucretia Vanderbilt line of toilet preparations, previously distributed exclusively by McKesson & Robbins, Inc. Groville Sales Corp., New York, will handle the distribution of both these lines together with that of the Fairest Co. George A. Stevens, president, Groville Sales Corp., is also president of Grenoville, Inc., the American firm.

"Pfizer Quality"

Chas. Pfizer & Co., Inc., New York, has announced that all bulk packages of citric acid manufactured will carry the Pfizer seal of quality. The seal is a circular one carrying the words, "Pfizer Quality," in white on a blue background.

Wizard Oil

Hamlins "Wizaroyal," formerly known as "Wizard Oil," has announced its removal to new quarters at 230 W. Huron st., Chicago. The company has been reorganized with the purpose of renewing advertising and sales activity on this product.

Wilckes Sales Policy

Wilckes, Martin, Wilckes Co., New York, a division of the Swann corporation, has announced that sales of all its products with the exception of lampblack, will be made in the name of its associate, the Swann Chemical Co. Stocks of Swann Chemical Co. products will be maintained at the Wilckes, Martin, Wilckes plant in Camden, N. J., which has been rearranged to improve manufacturing processes and facilitate prompt deliveries.

Eugenie Compacts

Superior Products Corp., New York, plans to manufacture compacts to match the changing fashions in women's wearing apparel and has brought out some with pictures of Empress Eugenie done in enamel.

New Wyeth Branch

John Wyeth & Bros. Co., Philadelphia, has established a branch warehouse at Atlanta, Ga., to serve the southeast. George Grant, formerly in charge of the Baltimore office, has been appointed district manager.

Brame Chemical Moves

Brame Chemical Co., proprietary medicines, has moved from North Wilkesboro to Asheville, N. C.

New Armstrong Plant

Armstrong Cork Co. plans the erection of a $1,000,000 factory on a site recently planned at Bay Point, Calif.

R. & H. Transfers Research

Roessler & Hasslacher Chemical Co., Inc., has announced the transfer of the following members of the research staff from the Perth Amboy, N. J., plant to the Niagara Falls, N. Y., plant: Dr. Sterling Temple, Dr. B. S. Lacy, Dr. A. M. Muckenfuss, Dr. J. F. Reichert, Dr. C. J. Wernlund, A. T. Hawkinson, A. W. Rudel, J. M. Wainscott, and H. A. Bond. Other transfer to Niagara Falls include P. M. Paulson, patent specialist; M. Marean, librarian; and I. L. Ressler, entomologist.

Michigan Chemicals

Michigan Chemicals, Inc., Grand Rapids, has been formed with capital stock of $50,000 to develop and manufacture chemicals and chemical compounds. The company will act as Michigan distributor for Grasselli Chemical Co. and Harshaw Chemical Co.

W. J. Bush Appointment

W. J. Bush & Co., Inc., New York, has appointed Clifford L. Harrison as its representative in New York State, succeeding Arnold E. Wenner, who resigned due to ill health. The company has also issued a new price list which will be forwarded upon request.

New Clifton Chemical Plant

Clifton Chemical Co., New York, has purchased a new factory in Jersey City.

New Package

Mallinckrodt Chemical Works, St. Louis, has adopted a new glass container for over 600 of their prescription chemicals. It is equipped with an enameled metal screw cap giving it an airtight seal. The sloping shoulder of the clear glass container permits a free flow to the last of the contents.

Ciba Deal

Ciba Co., Inc., New York, has announced a deal whereby every druggist buying one dozen tubes of "Nupercaine, Ciba Ointment" shall receive free his choice of two packages of "Digifoline, Ciba" ampules, liquid or tablets.

Yeast Research

National Grain Yeast Corp., Belleville, N. J., has announced a grant for comprehensive investigation of the chemistry and technology of yeast at the Mellon Institute of Industrial Research, Pittsburgh.

BOTANICALS are as good as they're grown

Botanicals "grown for the market" enjoy a decided superiority over herbs and flowers which, like Topsy, "just grow." Because several of our principals are constantly on the spot in the Central European fields, supervising plantings and harvestings, with an eye to ultimate uses, our crude drugs may correctly be described as deliberately "grown for the market."

•

CHAMOMILES - DANDELION ROOT - STRAMONIUM - BELLADONNA - LINDEN (Tillia) - PSYLLIUM - HENBANE - ALCANET ROOT - HOREHOUND - ALTHEA LEAVES AND ROOTS

•

ALKALOIDS...

BELLADONNA Roots and Leaves . . . Because we control, exclusively, gathering privileges in the forests of leading Hungarian estates, we are in position to supply a very superior grade of clean Belladonna Roots and leaves. The roots test 0.60 alkaloid.

STRAMONIUM... Showing the remarkable alkaloidal content of 0.45. Because of the poor grades currently available at this time because of abnormal heat, and dry weather last summer, buyers will be particularly interested in our present offerings of Stramonium. Interesting quotations.

HENBANE... High-quality imports. U. S. P. grade.

Samples and Quotations

BAMBERGER BLOCH & LANDESMAN, INC.

35 FRONT ST. NEW YORK, N.Y.

30 Klauzal Ucca - - - Budapest, Hungary.

PLAIMAR, LTD.

Distillers of

Essential Oils and Fruit Essences

PERTH, W. AUSTRALIA

Sandalwood Oil	*Guaranteed Genuine.*
Araucaria Oil	*A semi-solid natural aromatic with a warm rosy odour.*
Massoia Bark Oil	*Resembling Clove but more spicy.*
Huon Pine Oil	*95% Methyl Eugenol.*
Eucalyptus Oil	*All Grades and Varieties.*
Otto Boronia [Concrete]	*Australia's own Flower.*

Gum Acroides: Gum Kino

Ask for Samples and Quotations

THE IMPERIAL EXPORT COMPANY, Inc.

American Agents

11 Moore Street *Tel.: WHitehall 4-7622* **New York City**

Package Exhibitors

Acme Steel Co., Chicago, shipping room supplies and equipment; Artcote Papers, Inc., Irvington, N. J., fancy papers for box coverings; Better Packages, Inc., Shelton, Conn., gum taping machines; Container Van Wert, Ohio, shipping drums, fibre containers; Container Corp. of America, Chicago, containers of all materials, folding boxes and pails; Du Pont Cellophane Co., New York, cellophane; Einson-Freeman Co., Long Island City, New York, lithographs; counter and window display sets; J. L. Ferguson Co., Joliet, Ill., packaging machinery; General Box Co., Chicago, wooden boxes and shipping supplies; General Plastics, North Tonowanda, N. Y., plastic material, "Durex"; General Printing Ink Corp., New York, all varieties of printing inks; Gerrard Co., Chicago, bale ties, wire tying machines; Hinde & Dauch, Sandusky, Ohio, paper, fibre and corrugated boxes; Interstate Folding Box Co., Middletown, Ohio, paper boxes; Kalamazoo Vegetable Parchment Co., Kalamazoo, Mich., vegetable parchment paper wrappings; Lowe Paper Co., Ridgefield, N. J., clay-coated boxboard and papers; Mono Service Co., Newark, N. J., paper boxes and display set-ups; National Metal Edge Box Co., Philadelphia, paperboard novelties and specialties; Norton Laboratories, Lockport, N. Y., plastic material, "Norloc"; "Durez"; Package Machinery Co., Springfield, Mass., machines for wrapping with cellophane; Riegel Paper Co., New York, wrapping papers; Thomas M. Royal & Co., Philadelphia, paper bags; Sealright Co., Fulton, New York, containers of paper; Stokes & Smith, Philadelphia, paper box and package machinery; Sylvania Industrial Corp., New York City; Triangle Package Machinery Co., Chicago, automatic packaging machinery; Union Bag & Paper Co., Long Island City, bags are among those who will exhibit at the Second Packaging Exposition, Palmer House, Chicago, March 7-12.

Soap Raw Materials

The soap industry consumed 754,912,310 pounds of animal fats, tallow, grease, fish oil, etc., valued at $61,735,884; vegetable oils, 104,712,586 gallons, and $62,725,212; alkalies, 286,509 tons, and $9,794,821; abrasive materials, 77,802 tons, and $969,530, according to the 1929 Census of Manufacturers. Perfumes purchased as materials amounted to $5,159,036, while the color materials cost $115,914.

Citrus By-products

Citrus by-products will be studied at a new citrus fruit laboratory of the United States Department of Agriculture to be established at Weslaco, Texas, center of the lower Rio Grande valley citrus-growing territory, on land of the Texas State Agricultural Experiment Station.

Retail Outlets

Chain Stores Economize

Something new in the way of conventions has been inaugurated by the National Chain Store Association, which this year held a "stay-at-home" convention. Instead of having a general meeting some place, the association, for purposes of economy, had the whole convention program printed and mailed to members for their perusal at home. Proceedings were published in the same manner as a customary convention report, with the usual greetings, addresses and discussions. They concluded with a "foodless" banquet with two "speakers."

Chain Store Taxes

Chain store taxes continue to be sore spots in several states. Suits have been entered in North Carolina and Florida to test the validity of the chain store tax laws in these two states. Alabama, meantime, has ruled that a person who conducts a store having dividing walls between its several departments is not liable to the chain store tax, being liable for only one license.

18,000 McKesson Stores

McKesson & Robbins, Inc., with its sponsoring of a voluntary manufacturer-retailer cooperative chain has added 2,200 stores in eighteen months, bringing the total to 18,000 stores, according to Frank D. Coster, president. He asserted that this was evidence of the impetus given this type of retailing by the depression and that the merchandising ideas supplied had enabled many retailers to weather the economic storm.

Buying Drugs With Cotton

San Antonio Drug Co., wholesalers of that city, has sponsored an interesting merchandising plan among its retail customers. It has encouraged the latter to accept cotton from a limited number of farmers in payment for their accounts. The retailers credit their customers for the cotton at the local market price, plus one cent per pound premium. The wholesaler then accepts the cotton on the same basis.

The cotton must be used by retailers only in payment for specified merchandise selected from a special cotton deal. These items, however, are varied and in popular demand, but generally they represent somewhat better than normal profit, both for the wholesaler and for the retailers.

Pharmacy Week Co-operators

Barbara Gould, Barbasol Co., Bourjois, Inc., Chesebrough Manufacturing Co., Maltine Co., Wildroot Co., Colgate-Palmolive-Peet Co., Iodent Chemical Co., Kolynos, Inc., Pepsodent Co., P. Beiersdorf & Co., La Gerardine, Inc., Pacific Coast Borax Co., Packer Manufacturing Co., Lehn & Fink Products Co., D'Orsay, Coty, Inc., Bristol-Myers, Charles H. Phillips Chemical Co., Pompeian Co., Harold F. Ritchie & Co., Eastman Kodak Co., S. M. A. Corp., Cleveland; S-M-S Corp., Chicago; Celo, Inc., Utica; Health Products Corp., Newark; Scientific Laboratories, Scott & Bowne, Inc., San Antonio Drug Co., are among the drug firms who cooperated with the committee on National Pharmacy Week, October 11 to 17, by giving part of their radio broadcasting time to goodwill messages in behalf of pharmacy.

Associations

N. W. D. A. Convenes

National Wholesale Druggists' Association holds its fifty-seventh annual convention at the Ambassador Hotel, Atlantic City, the week of October 18. At the first session, October 19, following an address of welcome by Hon. Harry Bacharach, mayor of Atlantic City, and an address by the president of the association, J. M. Penland, Southwestern Drug Corp., Dallas, a code of trade practices for the drug trade, the result of four years effort, by Dr. E. L. Newcomb, secretary of the association, and his associates was presented by H. J. Osland. These principles of drug trade practice were developed from drug distribution cost analysis and an abstract of the proposed code will be found elsewhere in these pages.

James Penland
Retiring President

The address at the second session, October 20, was given by Prof. Paul H. Nystrom, who spoke on, "Where the Shoe Pinches in Present Distribution with special reference to changes now going on in Marketing, Free Deals and Retailing". T. W. Delehanty and Wroe Anderson, both representing the U. S. Department of Commerce, spoke during the next day's session on "Retail Distribution" and "The St. Louis Survey". The last business session was held October

BLACK PSYLLIUM SEED
BLONDE PSYLLIUM SEED
KARAYA GUM

Direct shipments from point of origin in lots of one or more tons. Immediate deliveries from our New York stocks. Write or wire for offers.

COMPAGNIE NATIONALE DES ALIMENTS NATURELS

27 West 20th St., New York

Cable Address: "Gelschaft," N. Y. Phone: Watkins 9-7768

Marseille, France
67 Rue de La Palud

Avignon, France
Les Tris 113 Chemin de l'Arrousaire

T.L. PIONEER

BEESWAX

Pure White Sun Bleached

Guaranteed under Food and Drug Act of June 30, 1906, Serial No. 4068.

Specify

T. L. BRAND

Sun Bleached under glass from the highest quality crude yellow beeswax obtainable. Especially suitable for the manufacture of toilet preparations of quality, that will keep and not turn rancid or yellow.

PIONEER BRAND---Yellow

THEODOR LEONHARD WAX CO., Inc.
HALEDON PATERSON NEW JERSEY
Long Distance Telephone: ARmory 4-1690

PIONEER T.L.

BEEHIVE BRAND BEESWAX

Absolutely Pure and Sun-bleached

Stearic Acid—Red Oil
Glycerine—Ceresine
Spermaceti

WILL & BAUMER CANDLE CO., Inc.
Syracuse, N. Y.

22 when H. J. Ostlund spoke on "Progress of the Work of the Statistical Division with Special Reference to an Analysis of 1930 Operating Costs of Wholesalers and a Study of the Free Gods Problem".

The entertainment program was featured by a reception on Monday night, a dance on Tuesday night, a concert on Wednesday night, and the annual banquet on Thursday night. In addition there were other features including bridge for the ladies and golf for the men.

U. M. M. A. Officers

United Medicine Manufacturers' Association has elected the following officers: president, Bernard Groblewski, Albert G. Groblewski Co., Plymouth, Pa.; eastern vice-president, A. L. Kanter, Nozol Co., Pittsburgh; central vice-president, I. R. Blackburn, Blackburn Products Co., Dayton, Ohio; southern vice-president, W. W. Burgess, Knox Co., Kansas City, Mo.; treasurer, William Halloway, Johnson, Halloway Co., Philadelphia; secretary, James F. Pickett, Washington; counsel, Clinton Robb, Washington.

N. A. R. D. Officers

National Association of Retail Druggists has elected the following officers: president, John W. Dargavel, Minneapolis; vice-presidents, William Rheinbeck, Milwaukee, M. L. Powell, Denver; C. S. Henry, California; secretary, Samuel C. Henry, Chicago; treasurer, Charles Ehlers, Cincinnati.

Drug Section Meets

Drug and chemical section, New York Board of Trade, held its second meeting of the year, October 15, at the Drug & Chemical Club, New York, Dr. Max Winkler, authority on international finance, and professor of international finance, College of the City of New York and the American Institute of Banking, addressed a large gathering on "The Pound Sterling and the Foreign Trade in the Drug & Chemical Field."

Alcohol Permit Procedure

National Wholesale Druggists Association is distributing to its members a new publication entitled, "Permit Procedure Relating to Industrial Alcohol and Other Nonbeverage Liquors," prepared by the Bureau of Industrial Alcohol.

Salesmen Golf Champs

"Bud" Alvarez, Grasselli Chemical Co., successfully defended his title as champion golfer of the Salesmen's Association of the American Chemical Industry, at the final tournament of the 1931 season held at Briarcliff Lodge, Briarcliff Manor, N. Y., September 15. Other low gross prize winners were C. S. Benjamin, General Chemical Co., 90; Robert Breuer, Atlas Refining Co., 93; Victor E. Williams, Monsanto Chemical Works, 97. Low net prizes for guests went to Rupert Lowe, Bakelite Corp., 76; S. Urban, E. R. Squibb & Sons, 76; D. S. Barnes, 79; John Powell, John Powell & Co., 86. Low net prizes for members were won by R. J. Grant, Noil Chemical & Color Works, 75; Harry Stebbins, Merck & Co., 75; S. C. Moody, Calco Chemical Co., 79; William H. Adkins, Givaudan-Delawanna, Inc., 79. Kickers' handicap prizes went to G. A. Dorland, McNair-Dorland Co.; B. J. Gogarty, American Solvents & Chemical Co.; W. I. Galliher, Columbia Alkali Co.; R. E. Dorland, Dow Chemical Company.

Chicago Association Banquet

Chicago Perfumery, Soap and Extract Association will hold its annual banquet December 2, at the Knickerbocker Hotel, that city. A. G. Schneider, Victor Chemical Works, is chairman of the committee.

New Members

Prince Matchabelli Perfumery, Inc., New York, represented by Prince Georges Matchabelli, president, and Corning Glass Works, represented by I. B. Clarry, New York manager, have been elected members of the Merchants Association of New York.

A. Ph. M. A. Winter Meeting

American Pharmaceutical Manufacturers Association will hold its regular closed mid-year meeting at the Mayflower Hotel, Washington, December 10 and 11.

New Products

THREE GANE ANALGESICS

Gane's Chemical Works, Inc., New York, has introduced two new ethical products, "Alphebin" and "Guphen." "Alphebin" is a compound of phenyl-allyl-barbituric acid with dimethylamino-antipyrin, which is said to have distinct therapeutic advantages over other barbituric preparations. "Guphen" is a guaiacol ester of phenyl-cinchoninic acid which is said to eliminate the disadvantages of the use of guaiacol and cincophen in their original state and is recommended for the treatment of upper respiratory diseases.

HERCULES POWDER'S MEDICINE

Hercules Powder Co., Wilmington, Del. has begun the marketing of "Herco," recommended for rubbing on the chest in cases of coughs and colds. "Herco" is made from steam-distilled pine oil and is being introduced in a local experimental campaign.

The powder company first went into the pine oil business in a roundabout way through attempting to increase the market for dynamite in blasting stumps out of cut-over land. In searching for some use for the stumps, they discovered a process for extracting pine oil with a phenol coefficient of five, and useful as a disinfectant and antiseptic.

Moulding Compound

Toledo Synthetic Products, Toledo, Ohio, is now producing "Plaskon," a new urea-base, heat-reactive, molding compound, which was evolved at Mellon Institute, Pittsburgh, under a series of industrial fellowships sustained by Toledo Seale Co.

New Pyrethrum Source?

Pyrethrum flowers from Porto Rico and the Virgin Islands may be the ultimate result of experimental culture now being carried on in those locations. Control of this experimental cultivation is centered in the Isabelo Experiment in Porto Rico.

Above: Gane's Alphebin

Left: New Ayer Package

HUISKING

NAPHTHALENE

Contracts for 1932 delivery booked now may prove advantageous. We are well placed. Please inquire.

COD LIVER OIL

PEDER DEVOLD BRAND
(*Trade Mark Registered*)
Highest Grade Medicinal
Practically free of odor and taste.
Richest in Natural Vitamins.

VITAMINE BRAND
(*Trade Mark Registered*)
The Standard Brand for Poultry and Animal use.

Headquarters for
DRUGS, OILS, CHEMICALS, RAW MATERIALS

Camphor	Menthol
Quinine Sulfate and Bisulfate	Santonine, U. S. P. (Santonine Co. of America)
Citric Acid	Bay Rum
Cocoa Butter (Rexking Brand)	Haarlem Oil "Klaas Tilly"

CHAS. L. HUISKING & CO., Inc.
155 Varick Street New York City

THREE ELEPHANT
BORAX
BORIC ACID

Stocks carried by the following distributors:

A. Daigger & Co., Chicago, Ill.
Detroit Soda Products Co., Wyandotte, Mich.
Arnold, Hoffman & Co., Providence, R. I. Philadelphia, Pa.
Thompson Hayward Chemical Company, Kansas City, Mo. St. Louis, Mo.
Marble Nye Co., Boston, Mass. Worcester, Mass.
Innis, Speiden & Co., New York, N. Y.
Maryland Chemical Co., Baltimore, Md.
In Canada
St. Lawrence Trading Company, Ltd. Montreal, Toronto and Vancouver

American Potash & Chem. Corp.
WOOLWORTH BUILDING NEW YORK CITY

BILE SALTS
CHOLESTERIN
IRON PEPTONATE

THE WILSON LABORATORIES

4221 So. Western Ave., Chicago, Ill.

also

816 First Ave., New York
24 Oregon Ave., Philadelphia
869 Folsom St., San Francisco
1220 W. Pico St., Los Angeles
826 Clark Ave., St. Louis

"Standard of Quality Always"

PLYMOUTH
MEDICINAL WHITE OILS
Russian *Domestic*

COLD CREAM OILS
and
ALL RAW MATERIAL FOR TOILET CREAMS

STEARATES
ZINC ALUMINUM MAGNESIUM
Made Right *Priced Right*

M. W. PARSONS IMPORTS
AND
Plymouth Organic Laboratories
55 ANN STREET, NEW YORK

Advertising

Drug Advertising Down

Expenditures for drug and toiletries advertising in national magazines dropped to $2,277,109 in September, a decline of 12.4 per cent. from $2,600,987 spent in September, 1930. Appropriations in national farm magazine suffered a similar cut, falling from $48,916 to $40,736, a decline of 16.7 per cent., according to the Business Survey Department of Dorrance, Sullivan & Company, Inc., New York advertising agents. The total for both forms of advertising was $2,317,845, a reduction of 12.5 per cent. from the September, 1930 figure of $2,649,903. Beauty preparations and toilet goods accounted for $1,808,909 or 79.5 per cent. of the total in national magazines, and medical and proprietary items accounted for the remaining $468,200, or 20.5 per cent.

During August the industry spent $2,630,326 for all types of national advertising. This is a gain of only 1.1 per cent. over the August, 1930 figure of $2,601,452. The August expenditure for radio broadcast advertising over national networks was $396,446, a gain of 61.2 per cent. over the same month in 1930, when $245,872 was spent. Total radio advertising for the drug and toiletries industry during the first eight months of 1931 reached $3,578,360, an increase of 84.2 per cent. over the like period in 1930, when $1,942,563 was the total. This eight-month period witnessed the expenditure of $27,334,496 for all types of national advertising, an increase of 3.9 per cent. over the $26,284,165 spent during the first eight months of 1930. Expenditures in national magazines during the first nine months of 1931 for drugs and toiletries totalled $25,635,629, a loss of 3.4 per cent. from the 1930 figure of $26,538,002, and the amount spent in national farm magazines was $438,352, a drop of 3.4 per cent from $453,503 spent in 1930.

Bost Campaign

Bost Toothpaste has announced an advertising and radio broadcasting campaign to boost sales in the New England territory. Earl & Co., Boston, is the New England representative.

Vapex Campaign

E. Fougera & Co., New York, has planned a Fall and Winter advertising schedule on "Vapex" which will include the use of 157 newspapers, 14 magazines and 10 radio stations.

"Magnesia Oxoids" Ads

Eton Products, Inc., Newark, "Magnesia Oxoids," is planning an advertising schedule to include every town and city east of St. Louis with a population of 25,000 or more.

"Do These Dogs Talk?"

Health Products Corp., Newark, N. J., as a part of its advertising of "White's Cod Liver Oil Concentrate" to the physician had a very striking advertisement in the September 12 issue of the Journal of the American Medical Association entitled, "Do These Dogs Talk." It was illustrated by pictures of three dogs whose appearance graphically illustrated the results of vitamin treatment.

"4711"

Ferd. Muhlens, Inc., New York, has started the biggest newspaper advertising campaign in its history on the "4711" line. The company is placing more advertising during the last four months of the current year than in the prior eight months.

"Pyro"

U. S. Industrial Alcohol Co., New York, has introduced a new merchandising device in promoting the sale of "Pyro" antifreeze. It is described as the "5 in 1 Temperature Sign" which will be supplied to "Pyro" dealers purchasing a "Pyro" tester, which is clipped to the temperature sign. The latter, to be displayed before servicing stations, indicates the temperature, the amount of "Pyro" required to prevent motor freezing at that temperature, and the quantities needed by the motors of twenty-four popular makes of cars.

On The Air

U. S. Industrial Alcohol Co., "Pyro" for anti-freeze, Ohman and Arden, NBC network, every Monday night beginning October 5, at 7.15 P. M.

McCormick & Co., Baltimore, Mabel Garrison and the McCormick Symphony Orchestra, WBAL, every Tuesday evening.

Harold F. Ritchie & Co., New York, "Scott's Emulsion," Romances of the Sea, CBS network, every Sunday evening at 9.30 P. M., and every Tuesday evening.

United Drug Co., Boston, Voice of Rexall, Spot Broadcasting over 175 stations, between 9.30 and 11.15, November 9-14.

Health Products Co., Newark, N. J., Danger Fighters, NBC network, every Saturday beginning October 10.

McKesson & Robbins, Inc., Bridgeport, McKesson Musical Magazine, NBC network, every Tuesday 9-9.30 P. M.

International Proprietaries, Ltd., Dayton, Ohio, "Tanlac," Captain Healy, 48 stations.

Account Changes

Elise Bock G.m.b.h., German cosmetics, to Erwin, Wasey & Co., Inc., Berlin.

Terri Cosmetics Corp., New York, to Frank B. Presbrey Co., there.

Harris Drug Co., New York, "Efracoids," to Churchill-Hall, Inc., there.

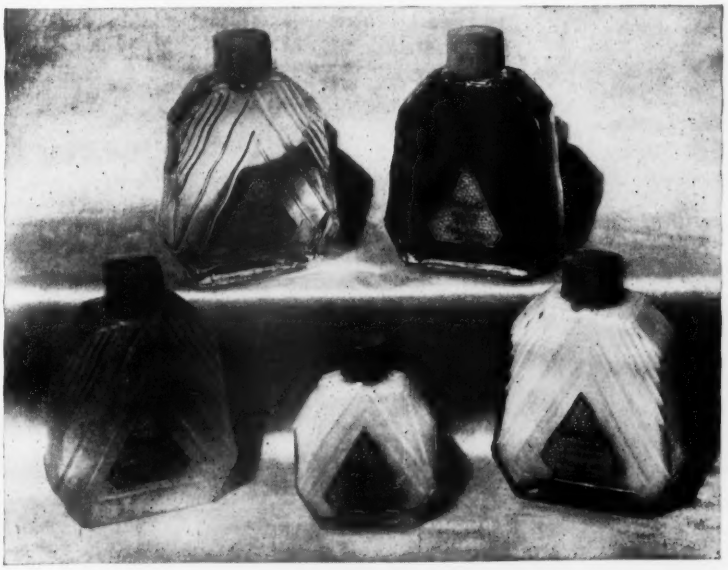
Stirizol Co., Ossining, N. Y., "Stirizol" and "Lanazol," to Lyman Irish & Co., Inc., New York.

Thomas Leeming & Co., Inc., New York, "Baume Bengue," to Street & Finney, Inc., there.

Carlyle Laboratories, Inc., cosmetics, to Monroe F. Dreher, Inc., Newark, N. J.

Forhan Co., Inc., New York, toothpaste and antiseptic, to McCann-Erickson, Inc., effective, January 1.

Glass Container Association, New York, to James F. Newcomb, there.



A New Plough Line

Would you like to examine a copy of this book

The wealth of information it contains may save you many times the slight bother of dropping us a line.

Here are the contents of Drug Markets CATALOG and DIRECTORY . . . . .

Machinery
Equipment

—

Glassware
Boxes
Collapsible Tubes
Cans
Seals for Bottles, etc.
Liners (cap)
Shipping Materials
Shipping Containers
Papers
Labels
Cosmetic Specialties

—

Fine Chemicals
Medicinal Chemicals
Industrial Chemicals
Photographic Chemicals
Solvents
Raw Materials
Glandular Products
Oils
Waxes
Cosmetic Materials

—

Essential Oils
Aromatic Chemicals
Gums
Flavors

—

Botanical Drugs
Spices

—

Association Members
Prices (Range)
Imports (10 years)

If you have not seen Drug Markets CATALOG and DIRECTORY, you surely do not realize how complete and valuable a reference book it is.

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DRUG MARKETS, INC.

101 West 31st Street New York City

Financial

Drug Stocks Off Sharply

Following the general market trend, the prices of common stocks of drug and cosmetics companies dropped sharply through September, reaching a new low for the year in the week ending the 30th, according to the index of the Standard Statistics Co., New York. Prices of common stocks of 337 miscellaneous industries also registered a new low, although the drop was less sharp then in the case of the drug and cosmetics companies. Detailed figures covering both indexes are given below:

1926 Average equals 100

	Drugs and Cosmetics	*337 Industrials*
Sept. 2	122.0	87.2
9	118.1	81.4
16	112.6	76.0
23	107.4	73.0
30	86.4	61.6
1931 High	133.8	114.7
Low	86.4	61.6
1930 High	174.7	174.1
Low	115.8	98.2

Earnings and Dividends

AFFILIATED PRODUCTS

Affiliated Products, Inc., sales during the six months' period increased 56 per cent. over last year, while net earnings showed an increase of over 87 per cent. The annual dividend of $1.00 was earned by a substantial margin in the first six months.

AMERICAN CAN

American Can Co., on Sept. 29 declared an extra dividend of $1 per share and the regular quarterly dividend of $1 per share on the outstanding $61,849,950 common stock par $25, both payable Nov. 16 to holders of record Nov. 2. A similar extra distribution was made on Nov. 15, 1930.

AMERICAN HOME

American Home Products Corp. has declared regular monthly dividend of 35 cents per share, payable November 2 to stockholders of record October 14.

AMER. POTASH

American Potash & Chemical Corp., omitted quarterly dividend ordinarily paid about Sept. 30 on the common stock, no par value. Previously, the company made regular quarterly distributions of 25c per share on this issue.

BROMO SELTZER

Emerson's Bromo Seltzer, Inc., reported for the six months ended June 30, a consolidated net income available for common stock totalling $929,652, or $1.38 per combined class A and B shares exclusive of stock held by subsidiary company. Net income of the parent company alone for the same period was $775,067, which was equal to $1 per share on combined A and B common stock after preferred dividends.

COLGATE

Colgate-Palmolive-Peet Co., declared the regular quarterly dividend of 62½ cents per share on the common stock, no par value, payable Oct. 21 to holders of record Oct. 6, and two regular quarterly dividends of $1.50 each on the pref. stock, payable Oct. 1 and Jan. 1 to holders of record Sept. 14 and Dec. 10 respectively.

KATZ DRUG

Katz Drug Co., reports for twelve months ended June 30: Net earnings after all charges, including Federal income tax, $509,919, a new high record, equal, after preferred dividends, to $4.03 a share on common stock, compared with $375,431, or $2.78 a share for twelve months ended Dec. 31, 1930; sales, $7,249,207.

Lehn & Fink Position

Lehn & Fink's sales for the first eight months of this year were less than nine per cent below those of the corresponding 1930 period according to Edward Plaut, president. Last year Lehn & Fink earned $1,706,771, equal to $4.07 per share. Dividend payments were $3 per share; the regular quarterly dividends of 75c per share have been paid since December 1925. The next dividend action will be taken October 22 for payment December 1.

In spite of this year's unusual expenditures for the introduction of new products, including three new Hinds beauty preparations, Formula L-F, a new antiseptic, and Lehn & Fink Sunburn Preventive, the earnings bear a sound relation to those of 1930, Mr. Plaut added.

MEAD JOHNSON

Mead Johnson & Co., declared the regular quarterly dividend of 75 cents per share on the common stock and in addition an extra dividend of 50 cents a share, making a total quarterly payment of $1.25, payable Oct. 1 to holders of record Sept. 15. Like amounts were paid on Oct. 1, 1930 and on Jan. 1, April 1 and Oct. 1 last. An extra dividend of 25 cents per share was paid in January, April and July 1930.

VADSCO SALES

Vadsco Sales Corp., reported a net loss of $68,863 for the six months ended June 30, after taxes, depreciation and other charges, comparing with a net loss of $124,582 for the first half of last year.

Drug Trade Conditions

The drug trade has not entirely escaped the economic depression of the past two years. Nevertheless, it has been outstanding as one of the few industries which have been only slightly affected by the continued adversities of general business, according to Standard Statistics. Records of the Federal Reserve Banks indicate that drug sales at wholesale declined approximately 10 per cent, as compared with those of the year previous, during the first half of the current year; for the month of July, a decline of 7 per cent was recorded. Our field investigations give evidence that the larger pharmaceutical and medicinal producers have been able to sustain sales at a level somewhat more favorable than the average.

The favorable 1930 earnings record of companies included in the drug group has been largely duplicated during the current year. Following a decline of only 2 per cent. in net profits last year, as compared with 1929, recorded income of six concerns for the initial half of 1931 showed a comparative recession of 1.5 per cent.

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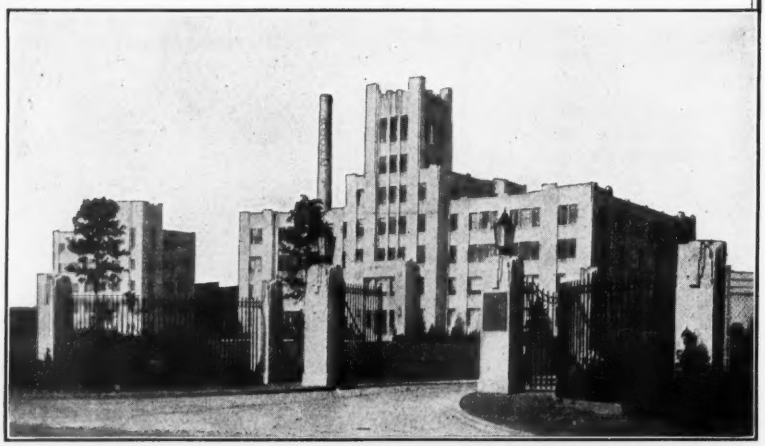

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With but moderate manufacturing costs, producers of proprietary remedies, medicines, etc., have not been able to effect the far reaching economies which have been possible in many other industries. Production costs have been reduced, nevertheless, both by lower raw material prices (a decline of 11 per cent. being indicated by available indexes for the past 12 months) and by at least moderate savings in the administrative and sales divisions.

Expenditures for goodwill advertising have not been reduced during this period, except in a few isolated instances. In fact, estimates originating from reliable sources indicate that total expenditures for this purpose during the first seven months of 1931 increased close to 5 per cent, as compared with those of a year earlier.

New Incorporations

M. & M. Chemical Corp., Dover, Del., United States Corporation Co., $100,000.

Fourre, New York City, toilet articles—G. M. Arnowald, 60 East 42nd St., 100 shares common.

Salore, New York City, toilet articles—E. Fichlander, 70 West 40th St., New York, 10 shares common.

A. A. Vantine Products Corp., New York City, perfumes—S. V. Ryan, Albany, N. Y., 200 shares common.

Thago Manufacturing Co., Newark, N. J., disinfectants—W. P. Allen, Newark, N. J., $20,000.

Perma-Facial, New York City, cosmetics—D. Bandler, 25 Broad St., 100 shares common.

Epeil Laboratories New York City drug stores,—N. Frakel, 291 Broadway, $10,000.

S. O. M. Distributing Co., Inc., Jersey City, N. J., deal in drugs, etc.—Joseph M. Schoenberg, Jersey City, $125,000.

Vienna Pine Laboratories, Inc., New, York City, drugs—U. S. Corp. Co., 20 shares common.

Pharmaceutical Advance Laboratories, Brooklyn, N. Y., drugs—M. C. Miller, 260 Snediker Ave., Brooklyn, $20,000.

Form-O-Seltzer Chemical Co., New York City—A. S. Arnold, 1450 Broadway, 100 shares common.

Pan-American Wholesale Drug Co., Brooklyn, N. Y.—Deutsch & Trier, Corona, N. Y., $20,000.

Isobel White Co., New York City, perfumes—J. L. Frieder, 358 Fifth Ave., $20,000.

D. B. Crawford, Inc., Atlantic City, N. J., druggists, chemists—Russell L. Browne, Atlantic City, $100,000.

Lesser & Co., Albany, N. Y., chemicals—Toohey & Noonan, Albany, $10,000.

Marshall Research, Inc., New York City, chemists, druggists—United States Corporation Co., $50,000; 500 shares common.

French American Cosmetics Corp., Wilmington, Del., toilet preparations—Corporation Trust Co., 1,000 shares common.

Scott Laboratories, Inc., Norfolk, Va., manufacture and compound patent medicines, chemicals and chemical concoctions, $50,000.

Pittsburgh Chemical Corp., New York City—Boskey, Schiller & Serling, 11 West 42nd St., $10,000 pf, 100 shares common.

Despadent Sales Corp., Wilmington, Del., dental specialties,—American Guaranty and Trust Co., $60,000; 100 shares common.

Recamier Trading Corp., New York City, cosmetics—I. Reiss, 220 Broadway, 100 shares common.

Mme. Lina, New York City, chemicals—L. Hess, 274 Madison Ave., $5,000.

Econoll Solvents, New York City, chemicals—G. Hoerner, 220 West 42nd St., $20,000.

Linum Co. of America, Inc., Newark, N. J., chemicals—William M. Brown, Newark, $300,000.

Dale Manufacturing Co., Pittsburgh, Pa., manufacture health preparations known as Dr. Dale's Health Salts—Capitol Trust Co. of Delaware, $25,000; 750 shares common.

International Flavors Corp., New York City, food flavoring—Burnsteine & Geist, 276 Fifth Ave., $5,000.

E. Tosse & Co., Inc., Brooklyn, N. Y., pharmaceutical products—Registrar & Transfer Co., $12,500; 100,000 shares common.

Obituaries

H. W. Huning

Henry W. Huning, vice-president, Mallinckrodt Chemical Works, and associated with that company for more than sixty-three years, died September 14, aged 79. He started with the company in April, 1868, six months after its founding. In

1876 he was placed in charge of purchasing and sales under the direction of the late Edward Mallinckrodt. He held this position until 1905 when the growth of the business made necessary the separation of the two departments. Since that time he has devoted his entire time to sales. He was elected a vice-president of the company in 1922.

Albert M. Todd

Albert May Todd, "peppermint oil king", and founder, A. M. Todd Co., Kalamazoo, Mich., essential oils, died at his home in that city, October 6, aged 81. He was born in Nottawa, Mich., and attended Northwestern University, leaving that institution in 1875 because of ill health. He then went on a walking trip through eight European countries, and, as a result of his observations on this trip, returned to this country, organized the A. M. Todd Co., for the growing of peppermint and producing oil from the plant. Later other essential oils were added and today the company has more than 3,500 acres under production.

In addition to his prominence in the essential oil business, he achieved an international reputation as a bibliophile and a collection of rare books, his collection being recognized as one of the best in this country. His collection of works of art was also a notable one. He was also very active in politics, was elected to Congress in 1896, and was particularly active in his support of public ownership of utilities, being largely responsible for the formation of the Public Ownership League of America in 1916. He was a member of many social, scientific, and fraternal organizations, institutes of art, and devoted much of his time to charitable activities.

F. W. M. McCulloch

Frederick W. M. McCulloch, vice-president, Dow Drug Co., chain stores, died at his home in Pittsburgh, September 30, aged 50. He was born in Beamerville, Ont., April 8, 1881, was for a time connected with the wholesale drug business which he left in 1905 to open his first retail store. He continued until he had established 14 stores throughout Pittsburgh.

James V. Reed

James V. Reed, general sales manager, J. B. Williams Co., soaps and toiletries, died at his home in Yonkers, N. Y., September 19, aged 61. He had been engaged in the toilet goods business for forty years and was widely known throughout that industry. He was active in Yonkers' civic affairs and was a special deputy commissioner of safety in that city.

John F. Geyer

John F. Geyer, president, Filler Machine Co., Philadelphia, died September 9 at his home in Willow Grove, Pa. He was a pioneer in the development of filling equipment used in many lines of manufacturing and an active member of the Mayonnaise Manufacturers' Association.

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Raw Materials

Mercury Position Uncertain

A further reduction in the price of mercury by the Spanish-Italian monopoly, badly unsettled political conditions in Spain and in Europe generally, a sharp break in the value of Sterling, and a sharp decline in the consumption of mercury in this country—all of these factors seem to indicate a very early complete demoralization of the market for mercury and the end of the attempt at control of the market by the Spanish and Italian governments.

The duty paid price of the monopoly mercury which was reduced some months ago, was further reduced to $93.00 per flask on September 19. Following this, Sterling broke sharply, and since mercury is always quoted in Sterling, a further readjustment was necessary. Thus, while the price in Sterling was raised in September 22 from £15 8s 6d to £17 10s, the actual duty paid price in this country is only $87.00 per flask with Sterling quoted at $3.88.

During 1931 the domestic material has consistently sold below the imported material to the extent that the only lot of imported material received in this country so far this year was 150 flasks which came in during August. This lot it is believed was bought by the importer for his own account following the first price cut by the monopoly. Unfortunately for the domestic producers, most of these producers were of the opinion that production in this country during the year would exceed consumption. This is due to the estimates which place consumption at 18,000 flasks for this year in this country, which figure is arrived by deducting forty per cent. from the 1930 consumption of 30,000 flasks. To stack up against this small consumption, the producers had the figure of 21,553 flasks as production in this country during 1930, indicating a surplus production here of over 3,000 flasks.

But, according to reliable information, production in this country has declined by well over 3,000 flasks, and it is not likely that this country will produce enough mercury during 1931 to supply its needs. So it would have been possible for the domestic mines to have quoted just under the monopoly and secure all the domestic business. But the weak financial condition of most of the mines have long prevented any really firm attitude on their part; and, furthermore, with the threat of a break in the European mercury market becoming blacker daily, the future for every one of these mines appears very uncertain. Under such condition how can these mines possess a strong front? It is a foregone conclusion that financing of the mines must be increasingly difficult, and also that the mines will for the most part have to go along on their own resources.

Why have the price readjustments been made by the monopoly, and just what makes the monopoly appear short lived? The answer to these questions lie in the fact that when the monopoly started to produce at the high quoted selling price, both the Spanish and the Italian mines were committed to a production greater than the estimated world consumption. Also the market was priced so high that American production was encouraged to the point at which this country was producing from two-thirds to all of the mercury needed here. The monopoly, however, did not slacken its rate of production, probably due to the fact that neither the Italians or the Spanish would permit any curtailment in their operations. Such curtailment would mean men out of work, and might add to political unsettlement. It is likely that the banks who were loaning the money on the surplus mercury stocks of the monopoly wanted to know how this mercury was going to be sold at the value placed on it by the mines, and asked that its value be reduced to bring it more in line with actual conditions.

Thus far two such readjustments have taken place, and more can be expected to follow, even though the monopoly is not dissolved. For this mercury can not be kept indefinitely, it must be moved. However, it is doubtful if the lower prices alone will move, since price has very little to do with consumption as far as mercury is concerned. Rather will production at the mines have to be curtailed before the market will be in a healthy condition.

It is stated that there are stocks of mercury in the hands of the monopoly totaling at the very least 150,000 flasks. The fact of the matter is that the stock is probably over 175,000 flasks, and might really be 200,000 flasks. This terrifically large quantity of metal hangs over the market, and will continue to hang over it until such time as either the monopoly takes steps to reduce, or the monopoly breaks and a wide open fight to sell mercury ensues.

With mercury priced today on spot at around $75.00 per flask, and with world consumption at a low point, it now appears only a short while before the monopoly will crash of its own weight. When this storm breaks and attempts are made to convert the entire surplus stock of mercury into cash, the buyer will be in a position to stock mercury at almost his own price. Furthermore, American buyers will be in a much better position than will European buyers due to the fact that American currency is relatively higher in value than English currency. It would not be surprising to see mercury selling in this country at $50.00 per flask under such conditions, and at this price there probably would not be a domestic mine that could continue in business. There is however, the likelihood that the English mercury operators would again appear in the picture by buying a very large part of the surplus stock, and by again buying the output of one or more of the mines in Spain and Italy.

Iodine and Iodides

Tincture of iodine has been reduced to $3.40 per gallon by the leading sellers. This is understood to be due to the fact that price cutting in this item has been quite common, and manufacturers have decided to make the cut price the open one and thus place the market on a definite basis. Prices of iodine and iodides remain unchanged.

From all indications, consumption of iodine products have declined rather sharply so far this year. At least this is what the statistics surrounding iodine itself would indicate. There is always the likelihood of there being surplus iodine on hand in this country last year which is being used up this year with the result that import figures would show a decline, although consumption might be the same.

Imports of crude iodine have declined steadily since 1927 as shown by the following figures:

Year	*Pounds*	*Value*
1925	246,474	
1926	711,291	
1927	926,492	
1928	720,766	
1929	627,162	
1930	493,587	
1931 (6 mo.)	189,128	

A comparison of the imports of the first six months of this year with the first six months of 1930 show a decline for the first six months of this year of 49,715, indicating a total decline of imports for the year of approximately 100,000 pounds.

It might be assumed that domestic production from oil well brines in California is responsible for this reduction in imports. However, from the most authentic information that can be obtained regarding the California development it is stated that the plant at Long Beach has a capacity of only about 70,000 to 75,000 pounds per year, and it is not definite that they are at present operating at capacity. It is stated, however, that another plant is under way at Huntington Beach, California, although actual production of

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iodine at this plant has not as yet taken place.

Other domestic sources of iodine which have been in the process of development for some time, are not at present believed to be in commercial production, although something definite is expected from these other sources almost any time. There has been no change in the price of crude iodine from Chile, and importers do not contemplate any change at the moment.

Menthol Market Breaks

The Japanese menthol market which had, for a long time, been maintained at a high level and firm position, has eased off considerably during the past month. During our last writing there existed considerable uncertainty as to the trend this commodity would eventually pursue. There were bullish factors in the spot market that predicted that the market would go to $4.00 per pound in case lots. These predictions were based on the scarcity of spot stocks and the fact that these stocks were in strong hands. The bearish factions in the market pointed out that the new crop was on hand and that the carry over was rather heavy so that the primary would have to lower their asking price.

There are various factors that contributed to the break in Japan. The June and July position of the new crop was estimated to be 25 per cent. below normal due to unseasonable weather which had retarded the growth of the peppermint plants. During the latter part of July and the month of August, however, the weather improved so that the plants grew well during those months. The final results were that a normal production was obtained. This aggravated the situation due to the carry over. The final factor that influenced the Japanese to lower their asking price was the bad break in the English pound Sterling, as they fully realized that the lower purchasing power of the pound would have to be offset to some extent by lower prices if menthol buying in England was not to be seriously curtailed.

Latest cables from Japan quote $2.55 a pound c. i. f. for prompt shipment. A duty and other charges must be added to this figure which would bring the price up to about $3.15 a pound at New York. Dealers on spot are now quoting from $3.65 to $3.90 per pound which is slightly under the prevailing quotations of a month ago.

Futures, however, are considerably lower. Menthol for February and March delivery are offered here at from $3.10 to $3.15 per pound. Between now and the time this low priced material is expected to arrive the market will gradually decline to the above quoted levels.

The reason for the apparent stability of the spot market in face of the open break in Japan is attributed to the fact that stocks here are still small and buying for replacement is still in a very small way. Replacement stocks have been coming in in twenty and thirty case lots and, although the consuming demand is considerably below normal for this time of year, these small shipments have been readily absorbed, in many instances being sold before arrival and shipped direct from the docks. It is generally acknowledged that should more generous supplies be received, that is, hundred case lots, this would have a depressing effect on prices.

Tartaric Acid at New Low

The extreme competitive condition that has arisen in tartaric acid continues to dominate this market to the exclusion of any consideration of a basis of price that would show a profit to producers. During the past month the spot price, which had already reached a level very close to the cost of production, has again been reduced 1c per pound and is now freely offered at from 26½c to 27½c per pound as to quantity.

Domestic producers continue to take the initiative in the price reductions. In the beginning of the price slashing campaign the importers managed to keep their price ½c below the domestic but the latest reduction would seem to have caught them unprepared to make prompt reply. The imported material is now quoted at 26½c per pound, namely the same price as the domestic.

Cream of Tartar Down Again

Cream of tartar has also been further reduced by the reduction in tartaric acid. The spot market is now on the basis of from 21¾c to 22c per pound, a reduction of ½c per pound during the past month for the domestic commodity. The imported article is offered for from 21½c to 21¾c per pound. The future trend of this item will be governed entirely by the future trend of the raw material market.

Rochelle Salt Off 1c

The reduction of 1c per pound in the cost of tartaric acid has again been passed along to Rochelle Salt which is now quoted spot at from 16½c to 17½c per pound as to quantity. The weakness and uncertainty in the raw material is still being felt in this commodity with competition reported as being as keen as that prevailing a month ago.

Seidlitz Further Reduced

Seidlitz mixture has again been reduced ½c per pound in sympathy with the lower cost of raw material. Spot price is now on the basis of from 13½c to 14c per pound as to quantity. The future trend of this commodity will be governed entirely by what further developments take place in the price war in tartaric acid.

Bismuth Salts Reduced

A decline during the past month in the price of bismuth metal has resulted in the announcement by leading makers of the salts of new price schedules on these items. New spot quotations on bismuth salts are as follows: Nitrate $1.15 per pound; Oxychloride $2.80 per pound; Subcarbonate $1.55 per pound; Subgallate $1.65 per pound; Subnitrate $1.35 per pound; Subsalicylate $2.45 per pound. The declines range from 10c to 15c per pound.

Glycerin Remains Low

Demand for glycerin is fairly active but the market remains without new feature. New business is being taken at the old schedule of prices that have remained in effect for several months without change. C. P. on spot is from 11c to 11½c per pound as to quantity, with the market steady. Some improvement in demand is looked for with the advent of colder weather as the various anti-freeze solutions using this commodity go into actual consumption.

Bromine Camphor Down

Camphor monobromated has been reduced during the past month in line with the general reductions in bromated products. The market is now $1.60 to $1.65 per pound with a good demand reported at the new level. A good demand is also reported as reaching the market for tablets, which continue firm and unchanged in price.

Cod Liver Oil Recedes

Cod liver oil, which had been a strong item throughout the summer months, due to the comparatively small production this year, has turned weaker. It was generally anticipated that a higher market would prevail with the advent of cold weather and resulting improvement in consumption.

Latest cables from Norway, however, indicate a sharp break in the market there as a result of the decline in exchange. This has worked out to the advantage of importers here and they have marked down prices to the basis of from $27 to $28 per barrel on spot. It is generally reported that ten barrel lots could be purchased at $26.50 per barrel.

There has been a noticeable improvement in the amount of business done at the new levels which represent a decline of approximately $3 per barrel.

Vice Consul Charles S. Reed, II, Taihoku, reports that among all classes of Chinese, Formosan Chinese, and Japanese

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there is a demand for cod liver oil and cod liver oil preparations which is influenced in great part by the consistent recommendation of physicians of both the modern and Chinese schools of medicine. Present annual sales show a steady increase over previous years.

There is no local manufacture of these products. Major imports come from Japan and Hong Kong. Taiwan assesses a 20 per cent. ad valorem duty on pure oil imports and 30 per cent. on emulsions, "drops", and other cod liver oil preparations.

Shipments of cod liver oil from Canada were slightly larger in quantity in 1930, having amounted to 172,400 gallons as compared with 169,500 gallons in 1929. The United States purchased the preponderant amount of 168,600 gallons last year.

Santonin at $105.00

A reduction of $10.00 per pound by a prominent seller of sanatonin has brought the price in some instances down to $105.00 per pound, with the top of the market quoted at $112.00.

Cinchophen Price Cut

Leading sellers of cinchophen have reduced prices to $2.75 per pound in 100 pound lots.

Is Ergot Short?

Although there are reports that the crop of Spanish ergot this year is negligible, there are also authentic reports that tend to deny this condition. Whether or not ergot will advance in price not only depends upon the amount of ergot available, but also depends upon the action of the Food and Drug Administration regarding the standards for this drug.

The situation lines up as follows at the present time. Reports emanate from Spain to this country and to European countries, that there is very little new crop Spanish ergot to be had. Reports from other parts of Europe are to the effect that such goods as are offered from Spain are mixed goods—that is, some new crop goods mixed with a greater proportion of old crop goods. Furthermore, reports from Hamburg are to the effect that no shippers in Spain will sell the goods with a firm guarantee that the goods will pass the requirements of the Food and Drug Administration for import into this country. Thus these goods must be imported into this country at the importer's risk as to quality. If the goods do not pass, the importer here must dispose of them as best he can and the exporter abroad will receive his money.

Representatives of Spanish shippers here make the statement that the first reports of no new crop goods were thought to be due to the unsettled political conditions in Spain which made the shippers there uncertain as to their supplies and as to their ability to obtain supplies. But later, these representatives state, it appeared that the crop was actually short. But both of these statements are not made definitely by the representatives, but rather are given as "what appears to be the case".

At direct variance with these reports is the fact that a large consumer in this country has bought sufficient Spanish ergot direct from reliable Spanish shippers for four months requirements. Furthermore, these goods have been bought with the firm guarantee that they will not only pass the requirements of the Food and Drug Administration, but that they will also pass the additional very rigid requirements which the manufacturer has set up for the ergot that he uses. Thus it would seem there is plenty of prime ergot available in Spain.

It might be that the rumors of shortage are being manufactured with the hope that one or more large consumers will be driven to cover their requirements. Under such conditions, if the crop is normal or slightly less, the shippers in Spain would have sold sufficient of the ergot to place them in a firm position regarding the sale of the balance. It might be that the Spanish shippers forsee the possibility of recovering from the low prices at which ergot has been sold for last two years, aided by the more rigid requirements of the Food and Drug Administration, which requirements make increasingly difficult the importation of goods of unknown origin or of countries which are not considered so careful in the preparation of ergot as are some of the Spanish shippers.

However, there is also the probability that the Spanish feel confident that consumers and dealers in this country are quite short of ergot supplies due to the fact that the item has been generally neglected by the trade here since the agitation regarding its quality and potency. It is well-known that certain of the crude drug merchants refused to handle ergot during the time when the drug was the subject of a controversy, and it was generally conceded that there would not be an appreciable profit for anyone handling the item from then on. With such an attitude on the part of importers and dealers persisting for any length of time, it is likely that the item should fall in price and that all should think that there would be plenty available at a low price anytime they are willing to buy it. It might be that it is this state of mind that the Spanish shippers are attempting to turn to their advantage.

Agar Market Strong

The market for agar agar continues very strong both on spot and in the primary market. Spot quotations are on the basis of $1.20 to $1.25 per pound for No. 1 and $1.17 to $1.15 per pound for No. 2, which represents an increase of 5c per pound during the past month. Stocks are small and in strong hands and there is no possibility of relief from the shortage until February. The article has been meeting with increased favor by the packers of psyllium seed with which it is mixed.

Psyllium Seed Easy

New crop shipments of French psyllium seed are arriving in this market in increasing volume. The keener desire on the part of many holders to move stocks, together with the lower shipment price abroad, has resulted in a continued easy tone in this commodity. Spot stocks are now freely offered at from 22c ot 24c per pound. This represents a sharp decline during the past month. The several reductions that have taken place total about 18c per pound. The primary market seems particularly weak where a sale of five tons is reported to have been made at a price as low as 15¾c per pound. It is estimated that the French psyllium seed crop for 1931 is in excess of 2,000 metric tons as against 1,200 tons for 1930.

The feature of this market is undoubtedly the favor being shown the blond or Indian seed by the large packers of psyllium. This seed is selling spot at from 8c to 9c per pound and is firm at this level. The blond seed is being widely exploited due to the lower prices prevailing over other grades of seed and the continued publicity given to its efficacy.

Trade Commissioner J. Bartlett Richards, of Bombay, reports that the psyllium seed crop of British India for 1931 is stated to be much below previous estimates submitted by Indian dealers in the commodity. Present unofficial reports place the crops harvested in March and April of this year at between 2,000 and 2,500 tons. A considerable portion of the crop is claimed to have been exported. It is stated that certain quantities will be retained in India for utilization in the production of cough medicine and other remedies.

While shipments of psyllium seed from Germany have been noted recently, it is reported by Commercial Attache H. Lawrence Groves, Berlin, that there is no local production of that product, exports having represented transhipments.

From Greece comes the report that the experimental planting of psyllium reported previously was considered successful, but only a relatively small quantity will be placed on the market this year. The current crop was planted in March and April, but an earlier planting during the coming season is anticipated.

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Gum Arabic at 8½c

The exceptionally heavy stocks of gum arabic has again been reflected in the spot market where price has been further reduced to the basis of from 8½c to 8¾c per pound. This is reputed to be the lowest price at which this gum has ever sold. It is reported that due to the fluctuation in the price of Sterling it is difficult for importers to get firm offers from the Sudan. Actual purchases, however, are restricted to small quantities.

Assistant Trade Commissioner Gabriel D. Ferrante, Cairo, reports that during the first six months of this year, 300,000 cantars of gum arabic arrived in all markets of the Kordofan Province, as compared with 196,000 cantars in the corresponding period of last year. Total arrivals in the Provinces of White Nile and Upper Nile amounted to 95,000 cantars. Sales in the El Obeid market during the first half of 1931 aggregated $335,000 in value, compared to $765,000 during the same period of last year. Total exports during the first six months of 1930 amounted to 13,016 tons, valued at $3,404,200, as against 13,142 tons worth $2,051,100, in the 1930 period. The United States was the destination of 2,451 tons during the 1931 period.

Tragacanth Dull

Gum tragacanth remains without new feature following the lowering of quotations about a month ago. The market at prevailing levels is firm although a limited volume of business is being done. It is estimated that the current yield of gum tragacanth in Turkey may aggregate 3,000 sacks, a figure in excess of last year's output. During August no transactions were recorded in the market abroad, relatively high prices being asked for the limited available quantities of generally superior grade.

Senega Demand Small

The demand for senega root at present has practically reached the vanishing point. Prices have been shaded to from 36c to 38c per pound, a decline of 4c per pound during the past month. The depressed financial situation abroad, it is expected will prevent a normal improvement in this market for some time.

Sandalwood Down Sharply

Sandalwood oil is considerably lower in the spot market. Prices asked are from $7.00 to $7.25 per pound. The decline in the rate of exchange has tended to reduce the cost of the raw material from which the U. S. P. oil is made in this country.

Ipecac Quoted Lower

Ipecac root is in ample supply at present. Supplies seem out of proportion to the demand which has been noticeably small. The spot market price has again been reduced to the basis of from $1.15 to $1.20 per pound for Cartaegna in bags, with the powdered being offered at from $1.30 to $1.40 per pound. This represents a reduction of 10c per pound during the past month. The primary market is particularly weak with shipment prices being reported as the lowest on record. The heavy consuming season, however, is close at hand so that an increase in consumer interest is expected to somewhat stabilize prices.

Peppermint Weak at $1.50

Although peppermint oil had, during the past several months, declined to the lowest levels it has ever reached in many years, the market is still decidedly weak with further recessions taking place during the past month.

The spot market is now from $1.50 to $1.60 per pound for the natural oil, with redistilled offered at from $1.70 to $1.80 per pound. There are indications in the market that these prices are subject to shading on firm bids.

Although the new crop is now generally accepted as being considerably below normal the carryover was very heavy. This carryover, together with the general decline in consuming demand is responsible for the weakness in this oil. The carry over is estimated to be in the region of 400,000 pounds.

Spearmint Declines

Spearmint was being offered in the primary market during the past month at lower figures. The market there sagged rather badly as stocks were heavy in the hands of middle western producers. This condition has been reflected in the spot market where prices are down to from $1.30 to $1.40 per pound. These prices are reputed to be below the cost of production.

Bay Oil Lower

Oil bay is lower on spot at from $1.80 to $1.95 per pound. This represents a decline of 10c per pound during the past month. It is reported that there is not much chance of this commodity again showing strength until demand improves. Buying has been in jobbing lots only. Lower replacement cost, however, is primarily responsible for the decline noted.

Orange Oil Weakens

Italian orange oil is again lower with demand being restricted to small lots. Spot quotations range from $1.80 to $2.05 per pound.

Citronella Easier

Ceylon citronella oil is still unde· the influence of an easier primary market. Spot quotations have been reduced to the basis of from 36c to 37c per lb. in drums and from 37c to 39c per lb. in cans. There were indications in the trade that local holders would be willing to shade these figures somewhat on firm business.

Java citronella oil however is firm on spot with cables coming through from the primary market unchanged. The local market for this grade is unchanged in price.

Trade Commissioner Richard P. Hendren, Batavia, reports that citronella oil enjoyed a relatively strong position during the first half of 1931, with more buyers than sellers at the prevailing prices. Stocks are in the hands of large operators reported as financially able to hold stocks for an indefinite period. Small quantities of high-grade citronella oil for ready shipment are quoted at Fl. 2.32½ per kilo Batavia, equivalent to Fl. 2.55 to Fl. 2.57½ c. i. f. New York. For July to December shipments, the price ranges from Fl. 2.37½ to Fl. 2.40 per kilo Batavia. Exports of citronella oil from the Netherlands East Indies during the first four months of 1931 as compared with the corresponding period of 1930 follow:

	Jan.-April, 1931	
	Metric Tons	*Florins*
April.....	72	178,137
First quarter.....	215	538,691
	Jan.-April, 1930	
	Metric Tons	*Florins*
April.....	79	289,168
First quarter.....	182	573,397

Lime Oil Down Again

Lime oil has again been reduced in the spot market. Distilled can be had at from $9.00 to $10.00 per pound, with the expressed offered at from $11.50 to $13.50 per pound. Shipment quotations were easier with the market in the West Indies reported as generally lower. The producing season is at hand and the lower exchange has also made it possible for dealers to reduce prices.

Wormseed Oil Weak

Wormseed has weakened in the primary market where holders have shown a tendency to turn stocks into ready cash. Considerable selling pressure has been noted there. The spot market, therefore has turned decidedly weak with oil being freely offered at from $2.75 to $2.90 per pound. It is stated that on a firm order considerably better than this could be done with indications that a bid of $2.65 would not be turned away.

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French Fighting Lavender Sophistication

By O. C. Zilisch, Paris

LAVENDER and jasmine seem to be contending for attention among people interested in the Grasse region, as well as several other districts for lavender, like the Vaucluse department. Both of these cultures are the talk among the growers and distillers at the present time. Lavender oil prices have stiffened a bit, due to a certain movement into consumption and also the smallness of the yield this year. As reported last month, the lavender yield fell below the accepted normal this year, because of the extremely hot weather, and also because of the lack of personnel for gathering. In fact, very hot weather, without any rain to speak of, was the rule in the Southern part of France, with much of the North suffering with cold, or cool weather. At the present time rains have made their appearance.

Much talk about the lavender crisis is finding its way into the press, newspapers like the Intransigeant of Paris devoting considerable space to dispatches from Avignon regarding the situation. Prices quoted on the ground for oil of good quality range between 90 and 100 francs ($3.60 and $4.00) per kilogram. These prices, it is claimed, do not allow the persons concerned to make anything, particularly the growers of lavender flowers. A certain amount of speculation exists, and this has also brought with it a condition that is anything but favorable for the future, for it must be borne in mind that lavender is becoming more and more important in pharmaceutical circles of France, where this oil is used for various purposes.

Talk with almost any chemist in the Grasse region, and invariably the question of lavender adulteration will be raised. That this adulteration exists is admitted, and everything is being done among the better class houses to do away with it. Pure oil of lavender as such is procurable, if one knows where to go for it, but it must be admitted that the impure or sophisticated product is easier to find. The fault lies, so say some of the chemists in the Grasse region, with the buyers of lavender oil, they not knowing what a pure oil is. Furthermore, it is stated by most chemists that no actual chemical analysis exists to give absolute proof of a pure oil of lavender. Samples of lavender oils from the most reputable houses in the world may be found on exhibition to prove this latter statement. And the wide difference in oils said to come from the same region, the cultures, etc., is surprising.

A great deal of attention is being given to ways and means for doing away with adulteration. Article after article is appearing on the subject in the agricultural press of the region, and suggestions are being submitted by competent persons from all over Southern France.

One suggestion that has attracted considerable attention is that of applying the simple control method as applied to production of lavender flowers and oil, a method that has been successfully used in connection with wines, spirits, tobacco, etc., in France. Such a system is very liable to enlist support from many directions, due to the unusually large amount of material that is finding its way into the press, agricultural and general. Something will be done before many more years have passed, is the opinion of those close to the situation. The prolongation process has gone too far, with quantities of lavender oil on the market that do not agree with production figures.

Some of the steps being taken to minimize the chances of adulteration are bound to produce results, because the movement behind these steps has taken definite form. If the people concerned continue their propaganda in favor of a legalized control of lavender oil, a product for which France is known, it will not be long before France will place into operation a commission to handle this situation. The French are very drastic in their measures once undertaken, and it will only be a matter of time to have the lavender flower and oil production thoroughly systematized in France.

Dealers in lavender oil, commission merchants, etc., are all of the opinion that the grower is getting the raw end of the deal, and that something has to be done to raise the price of this product in order to keep the grower satisfied. Gathering of lavender flowers in the mountain districts is a very difficult process, and with the prices that were paid this year, an average of 50 centimes (2 cents) per kilogram, no incentive was given to the gatherers for bringing in this culture.

It is hoped in France that the next few months will see a greater movement into production of lavender oil, particularly with the needs of soap manufacturers taken into consideration. Furthermore, cable demands, as reported last month, are increasing from countries like America, indicating that some of the stocks are running low. These cable demands are, in a number of instances, including a price limit within which the buyer finds himself, this indicating to the distillers in France that lavender oil is being offered in cities like New York at widely varying prices, with the consequent result that some actual buying is being held up momentarily.

The jasmine situation continues to grow worse from the point of view of the growers, some of which had large areas planted in this favorite culture of the Grasse region. This year will see a definite effort placed into operation for the doing away of jasmine plantations. Buyers of jasmine products are, in some instances, purchasing with the idea in mind that the next several years will see a rise in price that will be considerable. These buyers are, in most instances, locally situated, people who are in a position to hold on until the change comes. The synthetic jasmine situation does not bother a number of these people, because they point out that considerable quantities of jasmine are used in connection with synthetic jasmine, thus, in a way, decidedly increasing the use of jasmine. In other words, they welcome the synthetic product at a low price as a means for increasing the consumption of natural jasmine.

Gathering of the jasmine, insofar as it was done, ended officially on September 15th, although one could still see gatherers at work as late as the second of October. Jasmine stocks are increasing steadily, many hoping against hope that the situation will lift, giving impetus to a decided movement into production during the next few months. This hope has been awakened somewhat by the appearance of cabled and other demands for prices on jasmine products. It is thought that numerous buyers must be running low on jasmine products by this time, and the conviction seems to be very strong that a turning point is not too far distant.

Wherever one goes in the region by autobus or train at the present time the talk centers finally around the jasmine situation, and in certain instances around the conditions favorable to the growing of other cultures, particularly garden vegetables or fruits. Almost invariably one hears those engaged in conversation harking back to the good old days of 1926, when the growers received 36 francs ($1.44) per kilogram for the jasmine flower, as against 5 francs 50 centimes (22 cents) per kilogram this year. Blame for this abnormally high price is laid at the door of certain of the distillers, who, it is claimed, could have kept the price down to a happy medium, thus keeping the market steady, even during a crisis of this character.

The Garden for Experimental Research at Grasse, under the guidance of Pierre Boischot, is doing everything within its power to find a remedy for the situation, because it is recognized as being very serious. Everything is being studied from the point of view of amelioration, and the work is progressing satisfactorily. Vetiver and iris experiments, in addition to those applying to roses and jasmine, have been made, with very promising results. Furthermore, such humble cultures as the potato, artichoke, etc., have come in for their bit of attention, with the result that

(Continued on page 415)

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Medicinal Chemistry

(*Continued from page 353*)

hydroxy-m-amino-phenyl-arsenious dichloride hydrochloride, p-carbamino-phenyl-arsenious oxide, p-thio-carbamino-phenyl-arsenious oxide, phenyl-glycina-p-arsenious dichloride hydrochloride, phenyl-glycine-parsenious dichloride hydrochloride, p-a t h a n o l-amino-phenyl-arsenious oxide, p-propanol-amino phenyl-a r s e n i o u s oxide, p-hydroxy-phenyl-arsenious oxide and p-salicyl-amino-phenyl-arsenious oxide.

Determination of Vitamin A

Robert L. Jones, Frederick Stearns & Co.

This paper presented a statistical study of data secured in vitamin A assay of cod liver oil. The depletion technique of Nelson and the procedure recently submitted by McCollom, Steenbock and Bills have been used. With respect to criteria for judging time of administration of cod liver oil it is of interest to note that in this series of experiments 131 animals showed definite symptoms of ophthalmia before decline in weight, while in 63 the conditions were reversed. With doses of cod liver oil in excess of the curative level a marked increase in the growth rate preceded the alleviation of the ophthalmic condition by several days. Such doses of oil, while they did not shorten the duration of the opthalmia did effect proportionate gains in weight. This may be taken as further evidence that rate of growth is very intimately connected with vitamin A intake and should certainly be considered as one of the criteria for judging time for administration of the vitamin A carrying material in assay procedure.

Bactericidal and Fungicidal Effects of Amanations from Irradiated Oils. Robert S. Harris, John W. Bunker, & Nicholas A. Milas, Massachusetts Institute of Technology.

From time to time it has been reported by several investigators that irradiated oils affect photographic plates in the dark. The conclusion was drawn that this effect was due to some radiation emitted from the oils. Experiments in this laboratory have shown that the growth of bacteria and fungi is completely inhibited and these organisms destroyed when these organisms, growing on solid media, are placed several centimeters above these oils. Inasmuch as ultra-violet light possesses bactericidae and fungicidal properties this effect by irradiated oils was at first attributed to the emission of radiations of short wave length. This view was shown to be erroneous by placing a quartz plate between the organisms and the oil with the result that there was no inhibition. Furthermore, this bactericidal effect was produced with some oils which had not been irradiated. These results led us to the conclusion that this effect might be due to some volatile substances given off by the oil.

Observations on a New Posterior Pituitary Preparation.

Charles G. MacArthur, University of Buffalo.

The following points were investigated: (1) the nitrogen distribution, (2) an ultimate analysis, (3) color reactions for various hydrolyzed products. (4) the relation of the labile sulfur and free amino group to activity.

Assay of Extracts Containing Suprarenal Cortical Hormone. Russell L. Kutz, McGill University, Montreal.

The use of adrenalectomized cats or dogs for the assay of cortical hormone involves certain difficulties, namely: the number of animals required to rule out individual variation, the large amount of extract employed, and the special surgical technique. In an endeavor to find a simpler method, different procedures were investigated. Hartmann has suggested the growth curve of the adrenalectomized rat (weight 100 to 150 gms. when adrenalectomized) as a method of assay. A modification of this method has been chosen.

In the preparation of cortical hormone from frozen ox suprarenals, a new method for the removal of the lipoid has proven successful. This decreased greatly the time required for the preparation of active extracts.

Chemical Properties of the Testicular Hormone

T. F. Gallagher, Univ. of Chicago.

Certain chemical properties of the testicular hormone have been studied by means of the biological assay. It has been found with relatively purified material from the bull testis (one bird unit =0.1 mgm.) that the active substance is thermostable. It has neither acid nor basic properties and probably contains one or more alcohol groups which are connected with the biological activity. If unsaturated, the double bonds are either physiologically inactive or their reduction products possess similar biological potency to the untreated hormone. The substance resists acid hydroylysis but is destroyed by saponification.

Fats and Their Examination.

George S. Jamison, U. S. Bur. Chem. and Soils.

Methods commonly used for extraction, preparation and storage of fat samples for study from various kinds of oleaginous products are briefly considered. Application and limitation of some methods for examination of fats are discussed. A brief review is given of the methods for the investigation of the glyceride structure of animal and vegetable fats together with the outstanding results which have already been obtained.

Relations of Diet To Fat Deposition In Body.

William E. Anderson, Yale University.

This paper discussed production and storage of fat in body with particular reference to comparative effect of different fat precursors in the died. Character of fat deposited when carbohydrate and probably proteins are the dietary antecedents are also considered. Distribution and chemical nature of depot fat as effected by a variety of influences such as fasting, undernutrition and exercise are dealt with. Indications are given of some applications of newer findings to problem of practical nutrition; and some unsolved questions in this field of study are pointed out.

Lipid Excretion. Warren M. Sperry.

This paper consists of a brief review of the literature and a summary and discussion of the author's previous studies of lipid excretion. These studies have been concerned (1) with the demonstration of the existence of an endogenous lipid excretion and (2) with attempts to discover the source of the excretion. The bile and desquamation of intestinal epithelium have been ruled out fairly definitely as sources. Investigation of the role of bacteria has been inconclusive though it is probable that bacterial synthesis is not of great importance. Recent work indicates that the excretion comes in the main from secretion into the small intestine.

Ultra-violet Absorption Spectra of Vitamin B Containing Preparations.

Francis F. Heyroth & John R. Loofbourow, University of Cincinnati.

Ultra-violet absorption spectra of two vitamin B preparations provided by Dr. Arthur Seidell indicate the presence of a pyrimidine-ring containing compound or compounds. Details of the curves suggest that a resemblance to those obtained after the ultra-violet irradiation of nucleid acid. Whether or not the light absorbing material is to be identified with the biologically active component of the preparation is briefly discussed.

Hypophyseal Hormones.

Dr. Wm. Engelbach, St. Louis Univ. St. Louis.

(A) Growth hormone. Animal experimentation demonstrating biologic effects of its withdrawal and replacement. Cytologic relations of eosinophilic activity of the anteropituitary. The clinical measurement of hypo- or hyperaction of the Growth hormone. Clinical indications and therapeutic applications of the Growth hormone.

(B) Pituitary Sex hormones. Origin. Animal experimentation demonstrating specific reactions of the Sex hormones. Cytologic differentiation of the specific action of the Growth and Sex hormones in the human. Clinical interpretation, identification and therapeutic indication of insufficiency of the Pituitary Sex hormones.

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Endocrine Therapy In the Psychoses.
Dr. R. G. Hoskins, and Dr. F. H. Sleeper.

A brief resume is given of the status of endocrine therapy in the various psychoses. Particular reference is made to the effects of oral administration of endocrine products on patients suffering from schizophrenia numerically the most important psychosis.

The effect of glandular therapy on the course of the psychosis and on certain aspects of the physiological chemistry of the patients is considered.

Ovarian Therapy. J. P. Pratt, Henry Ford Hospital, Detroit.

Specific ovarian therapy has undergone many changes and is still in a state of flux. No definite physiological effects have been demonstrated as due to the dried preparations. More recent preparations, theelin and theelol, have demonstrable physiological effects in the human as well as animals. The outstanding reaction to these products is growth of the uterus. There are many other claims for their effectiveness in menopause, amenorrhoea, dysmenorrhoea, frigidity, sterility, etc. Considerable difference of opinion exists as to the efficacy of these agents in the conditions mentioned. There is no evidence that theelin affects the ovary directly—merely substituting for a deficiency. Disturbances of menstruation is the best sympton indicator to abnormal ovarian function.

Bacterial Lipids. R. J. Anderson, Yale University.

Uncellular organisms such as bacteria present interesting material for the study of the transformation of simple chemical compounds into such highly complex substances as lipids, carbohydrates, proteins, etc., which compose the living cell. The present report is a review of chemistry of bacterial lipids and particularly of the lipids of the acid-fast bacteria. The fat content of the acid-fast bacteria is high, ranging from 20 to nearly 40 per cent.

The lipids contained in pathogenic acid-fast bacteria such as the human, avian and bovine tubercle bacilli, the leprosy bacillus and the nonpathogenic timothy bacillus are very similar in chemical composition but they differ in the following important points from the fats of plants and animals:

(a) The bacterial fats are not true glycerides.

(b) All of the lipid fractions contain certain new and peculiar saturated fatty acids of high molecular weight which are either liquid at ordinary temperature or low melting solids. Some of these new acids isolated from the human tubercle bacillus exhibit optical activity while the other acid-fast bacteria contain analogous acids which are optically inactive.

(c) The bacterial lipids when injected into normal animals stimulate the proliferation of monocytes, epithelioid and giant cells which leads to the formation of tubercular tissue.

(d) The biological activity of the lipids is associated with the new lipid saturated fatty acids.

New Toothpaste Competition

(*Continued from page 344*)

almost invariably cut in price in competitive centers of distribution.

By this move Phillips becomes the only nationally known manufacturer of a milk of magnesia tooth paste at a list of twenty-five cents, although at least one nationally known product which lists at forty cents retail is cut in the larger centers to prices which in some instances go below twenty-five cents.

The production phase of a heavily increased distribution of this product has been no small problem, but has been well worked out by the officials in charge of the company. A modern tube filling machine has been installed among other important pieces of machinery—this tube filler being capable of filling 47,000 tubes in an ordinary working day with one girl operator.

Handling Materials

(*Continued from page 365*)

impossible to synchronize the movement of the packages, nor could the movement of the lowerator be synchronized with the deliveries of the overhead conveyor. In consequence some packages dropped a matter of a few inches when delivered on the lowerator pans and others dropped nearly two feet before the next pan moved into position. The system, moreover, compelled the keeping of a man at the discharge end of the lowerator to assort the various packages and to load stock room trucks. It was found that the packages could not be delivered fast enough to keep this man busy, but despite this he could not leave his post, on account of the danger of breakage, to take the loaded trucks to the stock bins and unload them. In short the system required more labor to operate it than would have been the case had the company continued to use trucks; breakage was appalling; and the accounting department found it impossible to obtain an accurate account of finished production.

In fairness to equipment and conveyor people it must be said that this system was not designed by conveyor engineers—which is really evident—but by a "repair and maintenance" department.

Spiral chutes provide a means for very rapid handling of finished stock and other packaged materials between floors. But in the final analysis they serve only to accelerate the movement of stock between floors; they do not save handling—as a matter of fact they cause extra loading and unloading. The trucks must first be loaded at the production lines, taken to the chute and unloaded. At the discharge end in the stock room other trucks must be held in readiness and loaded as the packages come down the chute; after which they are taken to the bins and unloaded. When trucks are loaded at the belts and taken down in an elevator to the stock room only one loading and one unloading are necessary. Frequently, however, elevators, used for serving an entire building, are too busy to keep the manufacturing floor clear. In this event a chute serves a useful purpose as an auxiliary.

In designing a chute the discharge end must be carefully pitched to check the momentum of the downcoming packages. We have seen a chute installed by an incompetent maintenance "engineer" so badly designed that the packages were catapulted out of it half way across the stock room.

On the whole, when stock must be taken from the finishing floor to a stock room on a lower one, that form of lowerator consisting of sections of roller conveyors has many advantages which are lacking in the others, particularly for handling case goods. These are widely used in the drug trade for handling both finishing materials and finished stock.

The superiority of Cod Liver Oil

Leading authorities have recently proved by the most thorough researches that a certain number of D vitamins in the form of Cod Liver Oil are far more effective in the treatment of rickets than the same or even double the quantity of these units in the form of irradiated Ergosterol.

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DICTIONARY CORRECTIONS

SECTION C

Completely Denatured Alcohol No. 5.
5 parts Isopropyl, ¾ parts Alcotate, ¾ part Aldehol, ½ part Pine Oil.

Aluminum Chloride.
Soluble: One Gm. in about 0.5 cc. of water and in about 4 cc. of alcohol at 25° C.; Also in Glycerin.

SECTION D

Camphor Oil.
Sassafrassy—Sp. Gr. 0.86-0.970.

Caraway Oil.
Constituents: Carvone; Carvene; Dextro-limonene.

Cedar Leaf Oil.
Sp. Gr. 0.887 to 0.900 at 15°C.; Opt. Rot. 59°25′.

Wormseed Oil.
American—Constituents: Ascaridol 62 to 65%.

SECTION E

Arrow Root.
St. Vincent Root—Constituents: Moisture 15.15%, Protein 0.10%, Fat 0.02%, Starch 84.45%, Fibre 0.03%, Ash 0.25%.

Palm Wax.
M. P. 63°C.-74°C.

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Correction List
DRUG MARKETS
Catalog and Directory

Please make the following corrections in your copy of Drug Markets 1931 Catalog and Directory.

We shall be glad to receive notices of further errors which you discover in using this volume. Further errors brought to our attention will be published in an additional correction list.

SECTION A—MACHINERY AND EQUIPMENT

Cutters, Grinders or Shredders
Abbe Inc, Paul O., Little Falls, N. J.

Filling & Counting Machines, Pills, Tablets And Capsules.
Ayers & Son, John W., 90 Walker St., New York.

Labeling Machines, Bottles, Jars, Etc.
Burt Machine Co., Baltimore, Md.

SECTION C—CHEMICALS AND RAW MATERIALS

Bees Wax.
Strohmeyer & Arpe Co., 139 Franklin St., New York.

Calcium Chloride.
Columbia Alkali Corp., 350 Fifth ave., New York

Dibutyl Phthalate, Normal.
Commercial Solvents Corp., 230 Park Ave., New York.

Mercury.
Berk, Inc., F. W., 395 Lexington Ave., New York.

Thymol.
Magnus, Mabee & Reynard, Inc., 32 Cliff St., New York.

SECTION D—ESSENTIAL OILS, AROMATIC CHEMICALS, GUMS, AND FLAVORS

Acetophenone.
Fries & Co., George G., 160 Fifth Ave., New York.

Benzyl Alcohol.
Fries & Co., George G., 160 Fifth Ave., New York.

Diphenyl.
Dow Chemical Company, Midland, Mich.

TABLE OF CONTENTS

GUMS will be found in Section D, which should read Essential Oils, Aromatic Chemicals, Gums, Flavors.

Patents

UNITED STATES PATENTS

Aromatic Hydroxy Aldehydes

These aromatic hydroxyaldehydes of the ortho and para varieties are made by oxidizing alkali metal compounds of corresponding propenyl derivatives with excess of an aromatic nitro compound. Friedrich Boedecker, Berlin-Dahlem, Germany, assignor, J. D. Riedel-E. de Haen A. G., Berlin-Britz, Germany. U. S. P. No. 1,816,248, filed November 28, 1927.

New Synthetic Pharmaceuticals

Methylisopropylenephenols are made by heating to 300° C. compounds formed from condensation of a cresol and acetone. This condensation takes place at slightly greater than room temperature in presence of gaseous hydrochloric acid. The product is heated as above to effect decomposition. The decomposition products are then subjected to fractional distillation. The fractions, which contain the methyl-isopropyl-enephenols, are collected. Hans Jordan, Berlin-Steglitz, Germany, assignor Schering-Kahlbaum A. G., Berlin, Germany. U. S. P. No. 1,816,286, filed June 20, 1927.

Disinfectants

These disinfectants are compositions which are in an emulsion form, the stability of which is its feature. Thus high concentrations of the active substance in emulsified form is obtained by mixing chlorothymol in water with a resinous soap. Friedrich Raschig, Ludwigshafen-on-Rhine, Germany, assignor, Dr. F. Raschig, Ludwigshafen-on-Rhine, Germany. U. S. P. No. 1,816,297, filed February 17, 1922.

New Pharmaceutical

This product is a compound of noncylic nitrogen base, gold and succinimide. William J. Pope, Cambridge, England U. S. P. No. 1,819,385, filed October 11, 1930.

New Chloral Pharmaceutical

The product is derived from chloral, which is condensed with ortho-ethoxy-hydroxybenzene. The product is crystalline in character and has a melting point of 112° to 113° C. It is very difficultly soluble in water benzine, and cold xylene. It is on the other hand easily soluble in alcohols, ketone and hot xylene. It yields 3-ethyoxy-4-hydroxybenzaldehyde by saponification and a suitable oxidation. Oskar Spengler, Neubabelsberg-Bergstucken and Hugo Pfannenstiel, Dessau in Anhalt, Germany, assignors, Winthrop Chemical Co., Inc., New York. U. S. P. No. 1,819,132, filed April 22, 1930.

Preserving Enzyme Solutions

The method of preserving enzyme solutions consists in adding one-half of one per cent. of pine oil based on weight of solutions. Leo Wallerstein, New York, assignor, Wallerstein Company Inc., New York. U. S. P. No. 1,820,957, filed October 6, 1928.

Preparation Containing Medicinal Oil

The patent is concerned with a stable medicinal preparation containing castor oil. The first step is to dissolve one and one-half parts of isinglass in 180 parts of water. Then, while the mixture is being agitated, 120 parts of castor oil are added to the solution. During this addition, the latter solution is kept boiling gently until a white creamy emulsion is formed. Thereafter, emulsion is cooled, while being agitated. Addition of 100 parts of sugar is next step, and mixture is heated until the sugar is dissolved and emulsion begins to stiffen. Then mass is intermittently heated to increasing and decreasing temperatures not exceeding boiling point until mass begins to stiffen and appears as if it were about to sugar. Mass is allowed to cool and harden sufficiently to be formed into pieces. Frank B. Vallentine, Belle Center, Ohio. U. S. P. No. 1,804,135, filed December 16, 1927.

Dialkylbarbituric Acid Drugs

The alkyl groups are of same or different types, but in any compound in which either alkyl group represents the isopropyl group, the other does not represent the allyl group, and in any compound in which either represents the ethyl group the other does not represent the ethyl group. Ernst Preiswerk, Basel, Switzerland, assignor, Hoffmann La Roche Inc., Newark, N. J. U. S. P. No. 1,805,294, filed July 10, 1925.

Casket for Talcum Powder Cans

Body of the can used for fine powders, is open at the top. A washer of sheet material is placed across top end of can into which the presented top end is indented and has a hole through which the material in can is discharged. Washer has a stiff body portion and a top closure member with an external flange driven and tightly fitting down over end of can and permanently pressing washer against it. Edmund Hoffman, Brooklyn, N. Y., assignor, American Can Co., New York. U. S. P. No. 1,806,802, filed May 11, 1928.

Organic Mercury Compounds

These new pharmaceutical chemicals have the following general formula: R-C-R_1(0). In this formula R represents a substituted aromatic residue and R_1 a mercuriated aliphatic residue. August Albert, Munich and Johannes Pfleger, Frankfort-on-the-Main, Germany, assignors, Winthrop Chemical Co., New York. U. S. P. No. 1,815,604, filed October 27, 1923.

BRITISH PATENTS

Anterior Lobe of Hypophysis Hormone

Hormone is obtained by salting out urine of pregnant women or an aqueous solution of hormone is prepared therefrom with any of following salts either alone or in admixture: sulphates of zinc, aluminum and ammonia, sodium acetate, potassium acetate, chlorides of zinc, barium, and calcium, potassium carbonate, calcium nitrate, or a mixture of sodium sulphate and magnesium sulphate. Quantities are used should be such that concentration of anhydrous salt in liquid is 20% or more. Fractional precipitation and/or ice cooling may be employed. I. G. Farbenindustrie A. G., Frankfort-on-Main, Germany. B. P. No. 349,592, filed January 31, 1930.

Making Therapeutic Substances

These new therapeutic compositions are made from the central nervous organs of vertebrate animals. Extracts are prepared of these organs in water or in aqueous solutions of salt, and mixed with organic liquids so as to give a precipitate. This precipitate has an exciting action on the central nerve system. Schering-Kahlbaum A. G., Berlin, Germany. B. P. No. 349,257, filed April 25, 1930.

Therapeutic Agents

A 2-halogeno-quinolin-carboxylamide is condensed with an amino alcohol. A large number of examples are given. Products are oils and are solids. Society, of Chemical Industry in Basle, Basle Switzerland. B. P. No. 346,180, filed April 17, 1930.

Adhesive Plasters

This process has to do with production of an adhesive plaster free from the common trouble that is found with the ordinary adhesive plaster in that it tends to stick when rolled upon itself, and also to become soiled when handled. The

process consists in singeing the exposed fabric backing and then applying thereto a coat of a cellulose ester or viscose. Johnson & Johnson Ltd., London, England. B. P. No. 348,694, filed February 15, 1930.

Manufacture of Perfumes

Gamma-cyclo-hexyl-alpha-alkyl-butaldehydes are made from butyraldehyde. They have a bitter odor, that is particularly the 2:2:6-trimethyl homologues. This odor resembles that of nuts and leaves. The products are highly useful for blending in perfumes. I. G. Farbenindustrie A. G., Frankfort-on-Main, Germany. B. P. No. 347,052, filed June 18, 1930.

Manufacturers of Odoriferous Compounds

These are cyclic acetals obtained by condensing a dihydric alcohol with a phenylated aliphatic aldehyde. They are of use in perfumery. Thus a compound with a rose odor and boiling point of 115-120° C. at 12 millimeters pressure is obtained by condensing phenylacetaldehyde with glycerol and a similar odor is obtained with propylene glycol. A hyacinth odor is obtained when alpha-beta-butylene glycol is used and a mignonette odor with beta-delta-isohexylene glycol. Hydratropaldehyde condensed with glycol gives an earth and mushroom odor, the compound boiling at 106° to 108° C. and five millimeters pressure. When beta-phenyl-normal-propaldehyde is condensed with glycol a flowery and fruity compound is obtained. Cinnamldehyde, condensed with glycol and giving a compound boiling at 140° to 145° C., at eight millimeters pressure, produces a substance with a cinnamon odor. I. G. Farbenindustrie A. G., Frankfort-on-Main, Germany. B. P. No. 346,115, filed February 28, 1930.

Aluminum Pharmaceutical Compounds

In the first patent complex aluminum compounds are described. Thus alkali aluminates alone or together with potassium sodium, barium, calcium or magnesium carbonates are dissolved in aqueous solutions of aliphatic dicarboxylic or hydroxycarboxylic acids contained more than C_6 per molecule. Complex salts of two or more of these elements with oxalic, tartaric, and lactic acid are described. Formulae of the crystalline salts are given. In the second patent aluminum salts of organic acids are covered. Thus granulated aluminum is activated by immersion in a solution of mercuric chloride and is then dissolved by boiling with a solution of an aliphatic dicarboxylic acid or hydroxy-carboxylic acid, for example lactic acid, oxalic acid, tartaric acid or glycollic acid. In the third patent solid water soluble salts of oxalic acid are described. Thus solutions of neutral or basic aluminum oxalates are dehydrated at above 100° C., preferably in thin films or spray, in heated gas stream or in vacuum. I. G. Farbenindustrie A. G., Frankfurt-on-Main, Germany. B. P. Nos. 347,419, 348,790 and 348,789, filed March 24, 1930.

Stable Solutions of Acetylcholine Salts

Solutions of acetylcholine salts (hydrohalides) in incompletely acylated polyhydric alcohols, for example in glycerol monoacetate, glyceryl diacetate or beta-hydroxy-ethyl acetate, are stable in cold or hot. Preparations are suitable for injections. Societe des Usines Chimiques Rhone-Poulenc. B. P. No. 345,713, filed January 13, 1930.

Cholesterol Solutions

This patent describes process for manufacture of solutions of cholesterin or its esters or mixtures of these. Glycol or glycerol is added to these solutions to improve effect upon the skin. F. Passer. B. P. No. 348,082, filed November 28, 1929.

Quinoline and Acridine Compounds

These are bactericides. Benz-thioazoles, benz-oxazoles and benz-iminazoles carrying in 2- position a substituted quinolin or acridine residue and having at least one amino group are such compounds and are particularly effective against spherobacteria. I. G. Farbenindustrie A. G. Frankfort-on-Main, Germany. B. P. No. 347,515, filed May 29, 1930.

Thyroid Gland Extract

An aqueous extract of thyroid glands is treated with a limited quantity of saturated ammonium sulphate, forty to forty-five parts by volume, or other very soluble salt. The precipitate is rejected and the aqueous extract completely or fractionally precipitated by further addition of the saturated solution, the total of which added does not exceed 80% of original extract. The precipitates, which have the character of I-albumoses (0.6 to 0.8 per cent. of iodine, are purified by dialysis and reprecipitation. I. G. Farbenindustrie A. G., Frankfort-on-Main, Germany. B. P. No. 349,966, filed February 28, 1930.

GERMAN PATENTS

Inactive Menthol

The process of manufacture of inactive menthol, the racemate of natural menthol, melting point 34° to 36° C., of the acid phthalate 133° C., consists in first obtaining a previously purified crude menthol obtained from the crude hydrogenation product of thymol or inactive menthone and isomenthone by freezing or fractional distillation or by combination of the two methods of separation. Then a mixed isomeric menthol, melting point 52° to 53° C., of the acid phthalate 113° to 115° C., is obtained from the crude menthol, mentioned above, by the conversion of the crude racemate into crystalline ester acids or esters and their purification by crystallization. The racemate is regenerated from the pure compounds. Various examples are given of carrying out this process. Rheinische Kampfer Fabrik G.m.b.H., Duesseldorf-Oberkassel, Germany. G. P. No. 529,947, filed November 26, 1925.

Cosmetic Preparation

Rouge removing preparations composed of cocoanut oil with which a considerable quantity of rice starch has been mixed are unusable for reason that rice flour does not dissolve in oil and hence clogs pores when used on skin and renders removal of rouge difficult. A very effective preparation can be made from palm kernel oil or cocoanut oil. This preparation is odorless and has a strong cooling action. The new preparation is made in the following manner.

One hundred kgs. of palm kernel oil are slowly heated in an autoclave to about 50° C. and then 7½ kgs. of hard paraffin are stirred into same. Small quantities of perfume are added as desired before mass has completely solidified. Product is then pressed into suitable form. Due to addition of hard paraffin wax, melting point of palm kernel fat, (about 25° to 26° C.) is increased to about 33° to 34° C. This is about skin temperature and facilitates application. Julious Steiner, Berlin, Germany. G. P. No. 531,233, filed March 2, 1930.

Medicament for Tuberculosis

Feature of the process is that the tubercule vacilli are introduced into pistils of lettuce and tomatoes. Dr. Hans Much, Hamburg, Germany and Dr. Teofilip Nyren, Stockholm, Sweden. G. P. No. 519,835, filed November 28, 1929.

Process is concerned with preparation of an easily water-soluble colloidal silver tannon-albumen compound. An aqueous solution of albumose-silver-albumen is added at ordinary temperature to acid reacting aqueous alkaline solution of diacetyltannin. Colloidal solution of the diacetyltannin-silver-albumen compound obtained in this manner, is carefully dried in vacuum. Dr. Henry Cohn, Berlin and Dr. Conrad Siebert, Berlin-Charlottenburg, Germany. G. P. No. 519,531, filed March 15, 1923.

Acid salts of camphoric acid are formed with hyoscyamine and scopolamine and atropine. Process is simple one of mixing alkaloids with camphoric acid in usual manner. Schering-Kahlbaum A. G., Berlin, Germany. G. P. No. 519,053, filed April 16, 1926.

(*Continued on page 407*)

Abstracts

Abnormal Aniseed Oil

A study was made of certain aniseed oils, which showed abnormally low coefficients, less than 1.5520 at 25° C. Star-anise oils appeared to be perfectly satisfactory in other respects. It was concluded that these values bear no relationship to the freezing point or the melting point and also are not due to a deficiency of anethole. There is present in such an oil a fraction of low boiling point and "n" value, but otherwise the oil is quite genuine. It is suggested that the B. P. limit be lowered to 1.5510 at 25° C. W. M. Seaber and S. Marshall, Perfumery & Essential Oil Record, 1931, vol. 22, pps. 163 to 165.

Bergamot Industry

This article is concerned with Calabrian bergamot industry and gives suggestions for improvement from technical standpoint. It was found that content of essential oil in plant does not vary regularly with the gathering season, from December to February, that is as it advances, although generally higher yields are given in the early, and lower ones in the later periods. The machine now used for treatment of lemons in Sicily can be used to good advantage for improving extraction of bergamot. Fruit is subjected to centrifuging and is sprayed with water which is returned to the process after oil has been separated. Addition of salts to water enhances separation of oil, which is of excellent odor and paler than that obtained with ordinary process, containing less stearoptene and more esters. F. La Face, Boll. Uff. Staz. Sperim. Ind. Ess. Agrumi Calabria, 1931, vol. 6, pps. 46 to 67.

Hungarian Coriander Oil

Average essential oil content is 0.17 to 0.49 per cent. Oil is distilled with steam and product weighed. P. S. Jonas, Magyar Gyog Tarsas. Ert., 1931, vol. 7, pps. 24 to 29.

Portugal Hair Wash

Two good formulae for preparation of this toilet preparation are given. In first, 65 parts oil of sweet orange are mixed with 9 parts of lemon oil, 10 parts of bergamot oil, 5 parts of artificial neroli oil, 0.8 part of artificial rose oil, 0.1 part of vanillin and 0.1 part of hydroxycitronellal, and dissolved in 4800 parts of 96% alcohol. Then 4000 parts of distilled water are gradually added, and preparation may be colored light green or yellow.

In second formula, 80 parts of sweet orange oil, 5 parts of artificial rose oil, 10 parts of lemon oil, 15 parts of bergamot oil, 5 parts of lavender oil, 5 parts of vanillin, 1 part of coumarin and 30 parts of musk tincture are dissolved in 5600 parts of 96% alcohol and 3000 parts of distilled water. Both preparations are filtered after standing from 8 to 14 hours. Pharm. Zeitung.

Camphor and Oil from Cinnamomum Camphora

Camphor wood cinnamomum camphora which is grown in New Zealand was distilled with steam at about 20 pounds pressure, the wood being reduced to small chips and distillation continuing for 19 hours in case of leaves and for 24 to 28 hours in case of wood. Experiments were made with different parts of twigs and stems as well as leaves, and camphor oil was examined chemically to determine its ingredients. The yields were small. I. R. Sherwood and W. F. Short, Journal of the Society of Chemical Industry, 1931, pps. 195 to 198T.

Organic Calcium Compounds

Besides the well-known combination of calcium chloride with alcohol and the analagous products, which have been obtained with glycerin, there exists an entire series of addition compounds in which calcium chloride is associated with basic substances such as urea, for example $CaCl_2.4CO(NH_2)_2$, all of which are important from therapeutic standpoint. Latter substance has trade name, alfenil, and it is obtained by dissolving separately, in calculated quantities, calcium chloride and substance to be combined with it in alcohol, mixing solutions and evaporating on water bath. Thus addition compounds have been prepared from thiourea, thiosinamine, urethane, antipyrine, urotropine, etc. and calcium chloride. All these substances contain four molecules of organic compound to one molecule of calcium chloride. Products are stable and crystallize well and possess advantage of being less toxic than calcium chloride. M. Greenbaum, Journal de Pharmacie et de Chimie.

Making Glycerophosphoric Acid

Two new processes are described. In the first equimolecular quantities of phosphorus pentoxide and sodium phosphate are allowed to act on glycerin. In the second process phosphorus oxychloride and monosodium phosphate are allowed to act in proportion of one to two on glycerin. These reactions are carried out in vacuum at 120° to 180° C. Yield of glycerino-phosphoric acid by first process is 57% and cost of process is considerably less than that of processes now in use.

Second process consists in mixing anhydrous glycerin with phosphorus oxychloride which releases hydrochloric acid. Mass is heated on water bath towards end of reaction and hydrochloric acid dissolved is driven out. Then well desiccated monosodium phosphate is added and process is continued in usual manner. There appears to be formed certain esters of glycerine which are unstable and break down due to action of phosphorus oxychloride. Yield obtained is 66% and cost of process is about same as that of those customarily in use. There is one difficulty encountered in both of these processes and that is the glycerinophosphate formed, that is the calcium salt, is very finely precipitated so that filtration is difficult. M. Piokowski, Roczzniki volume 7, number 4.

Mercurimetric Analysis of Medicaments

The mercurimetric method depends on following principles. The mercuric ion is precipitated, being introduced in the state of mercuric sulphate, by sodium nitroprussiate. The precipitated, that is obtained, is dissolved in a standardized solution of sodium chloride, the clearing up of the liquid serving as an indicator determining the end of the titration. The calculation of the quantity of the products determined with the aid of a coefficient of theoretical equivalence and a practical coefficient as well, established by the author as a function of sodium chloride. The authors have continued their experiments in working out methods on this basis for the analysis of medicinal products of alkaloidal nature, such as sparteine, novocaine, stovaine, plasmochine. Tonesco and Popesco, Bulletin des Sciences Pharmocoliques, 1931.

Agar-Agar and Petrolatum Emulsion

Directions are given for preparation of this emulsion which is useful for many therapeutic purposes. The first step is to make paste containing 1½ parts of agar-agar and 28.50 parts of distilled water. Then second paste is made from 24.50 parts of gum arabic, 3.25 parts of gum tragacanth, 1 part of phenolphthalein and 43 parts of distilled water. Then add to second paste 25.5 parts of glycerin, and the two pastes are mixed together. Thereafter there are added 115 parts of liquid paraffin and 8 drops of cardamon oil, cinnamon oil, and caraway oil, and enough water to make total mixture 250 parts. Journal de Pharmacie de Belgique, 1931, page 584.

Titration of Iodated Tincture of Iodine

Free iodine is first titrated with hyposulphite solution. Then solution is oxidized with chloramine and bromine water and total iodine is titrated after it has been set free by a strong acid. F. Klatt, Apotheker Zeitung, June 1931.

Color Reaction of Medicaments

Plasmoquin forms a blue color when its epichlorohydrin solution is boiled with chloranil. Percaine under similar conditions forms an emerald green color. Sodium 5-iodo-2-hydroxypyridine acetate in aqueous solution, 1cc. gives blue coloration when heated with 6 to 7 drops of bromine water. Addition of concentrated sulphuric acid causes disappearance of color and precipitate. However, color reappears on addition of ammonia solution. An ammoniacal solution of pyrocatechol forms cherry red color when boiled with a little sodium nitroprusside. J. Sivadjian, Journal de Pharmacie et Chimie, 1931, Series VIII, volume 13, pages 528-9.

Tincture of Myrrh

History, origin, purification, properties and uses of myrrh are described together with physical and chemical characteristics and color reactions of nine different varieties and of Bisabol myrrh and Bdellium. Methods for their differentiation and testing are suggested and described. P. Bohrisch, Pharm-Zeitung, 1931, vol. 76, pps. 787-790; 800-802.

Deodorizing Lanolin

Deodorization of lanolin is accomplished with sulphur dioxide. Lanolin and sulphurous acid are put into an autoclave at a temperature below $-10°$ C., and when closed, temperature is increased to 40° C. Mixture is well agitated and allowed to cool to below $-0°$ 1C. Then liquid sulphurous acid containing the impurities, is run off. A further treatment with sulphur dioxide ensures complete deodorization. In place of melting the lanolin, it may be dissolved in a suitable solvent, and then this solution is extracted with liquid sulphurous acid. Bulletin Matieres Grasses, 1931, page 18.

Treating Fish Livers

A new process for treating fish livers to obtain cod liver oil, known as Mittelmann process, is described. It is claimed that when fresh cod livers are sealed in evacuated tins and autoclaves at 120° C., the oil which separates is colorless and free from usual taste and odor. The oil from freshly opened tins is claimed to give no color with antimony trichloride, but after standing in a bottle for ten days, oil gives a marked positive test. Claims have been examined using codling and cod livers. Oils gave definite colors with antimony trichloride, a maximum at 572 mu-mu predominating and agreeing in intensity with ultra-violet band at 320 to 330 mu-mu. On storage under nitrogen, even for 24 hours, oils gave enhanced blue colors, increase being due to appearance of adsorption at 606 mu-mu, the value at 572 mu-mu remaining constant. Ultra-violet absorption changed little with time. Steamed liver oil from same cod livers showed same effects, so that change in chromogenic value is not due to Mittelmann's process per se. Canning process results in poor and variable yields of oil, often mixed with much water. Steamed oils proved superior to the "Mittelmann oil" in taste, odor and color. Chemistry and Industry, 1931, page 440.

Alkaloids in Henbane and Belladonna

Author recommends following method for determination of alkaloid in henbane and belladonna. Ten grams of powdered drug, either henbane or belladonna, are mixed in a 250cc. flask with 100 grams of ether to which there is added after vigorous agitaton 7 grams of ammonia water. Mixture is allowed to stand for 1 hour. After solid matter has been allowed to settle, ether solution is allowed to pass through cotton wad into 150cc. bottle and then 3 grams of talc are added and mixture is agitated for 3 minutes. Thereafter 5cc. of water are added and after agitation for an additional 3 minutes, mass is allowed to stand for 1 hour. Then 50cc. of ether solution are rapidly filtered into small flask, distilled to dryness and heated on water bath until all ether odor has disappeared. Residue is then taken up with 10cc. of ether, flask is washed 3 times with 5cc. of ether; then ethereal liquid is treated with 1/10N acid, that is titrated therewith, and excess acid is back-titrated. T. Boehm. Apotheker Zeitung, 1931, number 50, pages 793-4.

Method of Determining Morphine

Method is based on formation of a diazotized coloring matter. Author describes application of method in analysis of concentrated opium, poppy heads and syrup of Diacode. In second instance 2 grams of pulverized drug are introduced along with 2 grams of animal charcoal into a 100cc. Erlenmeyer flask. Then 1 gram of 2% hydrochloric acid is added and 19 grams of methanol. Total weight is noted. Process at this point is concerned with extraction of active principle from poppy heads and requires no explanation. Solution finally obtained is used for making color test, after it has been perfectly clarified with animal charcoal. Analysis of concentrated opium is simpler, sample being dissolved in water, treated with basic lead acetate and filtered until filtrate is clear. Solution obtained is used for color determination. Treatment of syrup is about same, extraction being effected with methanol and decolorization with animal charcoal. Dr. L. David, Pharmazeutische Zeitung, 1931, number 52, pages 748-9.

Shaving Lotion

Following formula is given in Journal de Pharmacie de Belgique, 1931, page 584 for preparing a shaving lotion. Lotion contains 15 parts of boric acid, 4 parts of menthol, 125 parts of glycerin, 4500 parts of extract of witch hazel and 570 parts of perfumed alcohol. Ingredients are mixed together and allowed to remain 24 hours and then filtered.

Endocrine Therapy

The chemist has much to contribute to the manufacture and synthesis of active principles and in the determination of the identity or similarity of certain hormones now drawn from widely different sources; in devising a means of standardization on which accurate dosages may be based; in eliminating active contaminants; and in making possible lower prices. Technology Review, October, 1931, page 15.

Patents

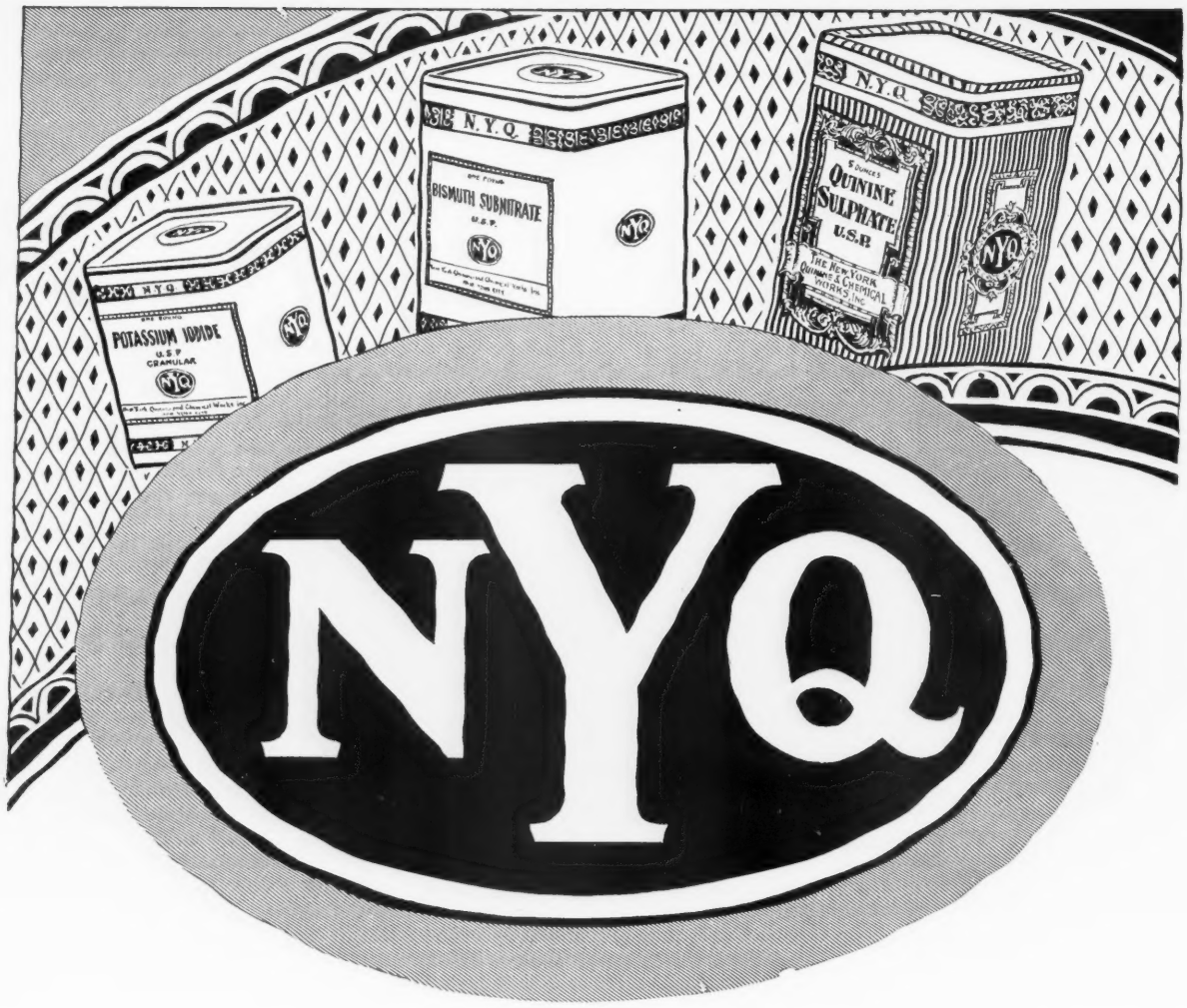
(*Continued from page 405*)

Hormone from Female Organs

This process is concerned with production of a chemically pure hormone from female inner-secretory organs. Starting point is extract of one of these organs freed from phosphatides, chloesterin, esters of cholesterin and fats as well as fatty acids, the purification being effected by metallic salts. Metallic soaps are removed with an electrolyte added to solution of preparation in petroleum ether. The cathodes of electrolyte give insoluble salts with unsaturated fatty acids and anions with cathode, for example lead, dissolved in petroleum ether. Hormone obtained is subjected to additional purification and purified by conversion into bromine addition product, particularly by bromination in a glacial acetic acid solution or in an ether solution and debromination with amalgamated zinc dust or zinc dust which has been covered with copper. Dr. Sigmund Fraenkel, Wien, Austria. G. P. No. 519,323, filed June 28, 1927.

Aromatic Arsinic Acids

The halogen in halogen-acylaminoarsinic acid is exchanged for an acyloxy group by interaction with an organic sodium salt. Esters produced from chloro-acetylarsinic acid and sodium acetate or sodium isovalerate or sodium crotonate, and from 3-chloroacetamidotoluene-6-arsinic acid and sodium isovalerate of sodium crotonate have low toxicuty and are good trypanocides. I. G. Farbenindustrie A. G., Frankfort-on-Main, Germany. B. P. No. 347,083, filed September 4, 1930.



Acetanilid	Cinchonidine	Quinidine
Bismuth Subnitrate	Morphine Sulphate	Thymol
Bismuth Subcarbonate	Ethyl Morphine	Salicylates
Cinchonine	Iodoform	Strychnine
Cinchona Alkaloids	Glycerophosphates	Bromide of Soda
Cinchophen	Opium	Bromide of Potash
Codeine Sulphate	Potassium Iodide	Bromide of Ammonia
Codeine Phosphate	Quinine Sulphate	Silver Salts

Menthol-Y (trade mark reg.) Vanillin

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Prices Current

Medicinal, Aromatic, and Photographic Chemicals, Crude Drugs, Spices, Essential Oils and Concentrates, Miscellaneous Raw Materials, etc.

Chemical prices quoted are of American manufacturers, spot New York, f. o. b. for immediate shipment, unless otherwise specified.

Products sold f. o. b. works are so specified. Imported chemicals are so designated. Resale stocks, when a market factor, are indicated "second hand."

Crude Drugs and Essential Oils are quoted f. o. b. New York (Manhattan with limitations) for immediate shipment

The range of price given is not "bid and asked," but are prices of different sellers, based on varying grades and/or quantities. Containers named are original packages most commonly sold.

Chemicals

Acetanilid
Hyoscyamine Alk.

Acetanilid, USP, 200 lb bbls..lb	.24	.25
Acetone, pure 350 lb drs wks..	.12	.14
Acetphenetidin, 225 lb bbls..lb.	1.25	1.30
ACID, Acetylsalicylic, 225 lb ....bbls.	.85	.90
Agaric, 1 oz vials ....oz	...	3.50
Arsenous, USP, 220 lb bbls lb.	...	.18
Benzoic, USP, 100 lb bbls..lb.	.60	.61
Boric, 300 lb bbls.....lb.	.09½	.10
Cacodylic, 5 lb. bot....lb.	...	8.00
Camphoric, USP, VIII 1 lb bot.....lb.	4.82	4.82
Carbolic, USP, crys 112 lb tins.....lb.	.17	.18
Cinnamic, 5 lb cans....lb.	3.25	3.50
Citric, USP, crys 230 lb bbl .....lb.	...	.35
USP, crys imp. 112 lb keg .....lb.	.41	.43
USP, powd 200 lb bbl....lb.	...	35½
Gallic, USP, 150 lb bbls..lb.	...	.74
Glycerophosphoric, 25% 1 lb bot.....lb.	1.40	1.75
Hydriodic, USP, 10% 5 lb bot.....lb.	...	.70
Hydrobromic, USP, 40% 155 lb. cbys.....lb.	...	.55
Hypophosphorous, USP, 30% .....lb.		
5 gal demis.....lb.	...	.85
Lactic, USP, VIII 100 lb cbys lb.	.53	.59
USP, X 100 lb cbys.....lb.	.57	.59
Phenylcinchonic.....lb.	...	3.25
Phosphoric, USP, Syr 70 lb drs.....lb.	.14	.15
Pyrogallic, crys 5 lb cans..lb.	1.30	1.40
Resublimed, 5 lb cans...lb.	1.60	1.70
Salicylic, USP, 100 lb bbls..lb.	.40	.45
Stearic, double pressed, bags .....lb.	.09	.10
Triple pressed, bags....lb.	.11	.12
Succinic, 100 lb bbls.....lb.	...	1.35
Sulfurous, USP, 6% 100 lb cbys.....lb.	.05	.06
Tannic, USP, fluffy 50 lb bbls. .....lb.	.90	.93
Powd 200 lb bbls.....lb.	.80	.85
Tartaric, USP, 300 lb bbls.lb	.26½	.27½
Aconitine, Alk, crys 1 oz vials .....oz.	...	30.00
Amorphous, 1 oz vials....oz.	...	20.00
Adeps Lanae, hyd 350 lb bbls lb.	.13	.15
Anhydrous, 350 lb bbls....lb.	.14	.16
Agaricin, 1 oz vis incl.....oz.	...	2.32
ALCOHOL, Benzyl, 5 lb bot lb.	1.20	1.35
Ethyl, USP, 190 pf 50 gal bbls.....gal.	...	2.56
Grain U. S. P. bbls....gal.	...	2.61
Pure tax free drums...gal.		
Ethyl.....	...	.42
Grain.....	..	.47
Denatured, (drums included) add 5c for bbls.		
No. 1 spec.....gal.	.27	.35
No. 5 comp.....gal.	.28	.36
23 a, spec.....gal.	.30	.38
39 b, spec.....gal.	.33	.47
30 m spec .....gal.	.28½	.42½
Isopropyl refd 98-99% drs. incl.....gal.	.55	.60
Phenylethyl, 1 lb bot.....lb.	4.30	4.50
Aloin, USP, 100 lb cases... lb.	1.41	1.44
Aluminum Acetotartrate kegs .....lb.	...	1.60
Amidipyrine, 10 lb boxes.. lb.	4.00	4.10
AMMONIUM, Acetate 100 lb kegs.....lb.	.38	.40
Benzoate, USP, 1 lb bot...lb.	...	1.27
Borate, 10 lb bot.....lb.	...	.35
Bromide, USP, 450 lb bbls lb.	.38	.39
Imported, 112 lb boxes..lb.	.39	.41
Carb, USP, lump 100 lb kegs .....lb.	...	.13½
USP, powd 100 lb kegs..lb.	...	.14½
Citrate, 100 lb kegs.....lb.	.90	1.30
Ichthyolate, as to brand..lb.	4.00	4.50
Iodide, USP, 25 lb jars ..lb.	...	5.20
Phosphate, dibasic 250 lb bbls .....lb.	.48	.50
Salicylate, USP, 100 lb kegs .....lb.	1.15	1.20
Valerate, USP, 25 lb jars...lb.	2.75	2.90
Amylene Hydrate, 1 lb bot..lb.	...	7.10
Antipyrine, USP, 100 lb cans.lb.	2.25	2.60
Apomorphine Hydrochloride, ½ oz. vials.....oz.	22.60	22.70
Arecoline Hydrobrom, 1 oz vials .....oz.	5.25	5.35
Aspidospermine Amorphous..oz.	...	15.00
Atropine Alk, USP, 1 oz. vials .....oz.	6.50	7.00
Methyl bromide, 1 oz vials.oz.	...	25.00
Sulfate, 5 oz cans.....oz.	...	2.50
Single ounce.....oz.		3.00
Barbital, 1 lb. bot.....lb.	4.00	4.35
Barium Iodide, 5 lb box....lb.	...	5.15
Sulfate, X-ray diagn bbls..lb.	.09½	.10
BAY RUM Porto Rico, 45 gal. bbls.....gal.	.75	.80
Domestic syn. 50 gal bbl..gal.	.70	.75
St. Thomas, 50 gal bbls...gal.	.80	.90
Benzonaphthol, 5 lb boxes...lb.	2.50	2.60
Benzoyl Cholride, 500 lb dr..lb.	1.00	1.05
Benzyl Benzoate, Medicinal FFC.....lb.	1.20	1.40
Chloride Redis, 160 lb cby.lb.	.30	.35
Formate, 1 lb bot.....lb.	3.25	3.50
Succinate, 160 lb cby.....lb.	...	5.25
BISMUTH, metal 100 lb cases .....lb.	...	1.25
Ammon. Citrate, USP, 5 lb cans.....lb.	...	3.25
Betanaphtholate, 5 lb box..lb.	...	2.90
Citrate, USP, 5 lb cans....lb.	...	2.60
Chloride.....lb.	...	3.00
Hydroxide .....lb.	...	2.90
Nitrate, 25 lb jars.....lb.	...	1.15
Oxide anhydrous.....lb.	...	3.25
Oxychloride, 25 lb boxes...lb.	...	2.80
Salicylate, 25 lb boxes....lb.	...	1.65
Subcarbonate, USP, 25 lb boxes.....lb.	1.55	1.60
Subcarbonate, X-ray diag 1 lb. bot.....lb.	2.50	2.57
Subgallate, USP, 25 lb boxes .....lb.	1.65	1.70
Subiodide, 5 lb lots.....lb.		4.10
Subnitrate, USP, 25 lb jar.lb.	1.35	1.40
Subsalicylate, USP, 25 lb boxes.....lb.	2.45	2.50
Tannate.....lb.	...	2.30
Borax, crys USP, 400 lb bbls.lb.	...	.06
Bromoform, USP, 5 lb bot cases .....lb.	1.65	1.90
Butylchloral Hydrate bot....lb.	4.00	5.00
Cadmium iodide, 10 lb bot...lb.	...	4.55
CAFFEINE Alk, USP, 1..... 100 lb kegs.....lb.	2.45	2.50
Citrated, 50 lb cans.....lb	2.20	2.45
Hydrobromide, 1 lb bot...lb.	4.80	5.00
Hydrochloride, 1 lb bot...lb	6.05	6.55
Sulfate, 1 lb bot.....lb.	5.40	5.90
Sodium Benzoate, tins....lb.	...	3.05
Salicylate, tins.....lb.	...	2.95
Calcium Bromide, 100 lb cs..lb.	...	.00
Carb, USP, 175 lb bbls....lb.	.05	.06
Glycerophos, 250 lb bbls...lb.	...	1.05
Hypophos, USP, 25 lb cans lb.	.55	.60
Iodide, 5 lb bot.....lb.	...	4.85
Lactate, USP, 500 lb bbls lb.	.45	.50
Lactophosphate Soluble...lb.	...	1.20
Powdered tins.....lb	...	1.00
Insol, powd tins.....lb.	...	.50
Phosphate & Sulfate Tooth Paste grade, Works..lbs.	.03	.06
Sulfide, USP, 100 lb drs...lb.	.21½	.24
CAMPHOR, Jap. ref. slabs 100 lb. cases.....lb.	.52½	.53
Refined powd.....lb.	.53½	.54
¼ oz tab, 100 lb cases....lb.	.66	.67
Liniment, bbls.....gal.	2.10	2.20
Monobrom, 100 lb cases...lb.	1.60	1.65
Casein edible, 100 lb kegs..lb	.45	.55
Charcoal Animal medicinal jars incl.....lb.	...	.50
Charcoal Wood, powd, 100 lb. bbls.....lb.	.06	.07
Chloral Hydrate, USP, 25 lb jars.....lb.	.78	.80
100 lb drums.....lb.	.73	.75
Cholesterin.....oz.	5.50	5.85
Chloroform, USP, 50 lb drs...lb.	.25	.27
Chlorophyll, 1 lb. bot.....lb.	2.12	2.30
Chromium Sulfate Scales, tins .....lb.	.45	.50
Powdered tins.....lb.	.50	.55
Chrysarobin, 50 lb tins.....lb.	3.75	4.10
Cinchonine Alk, 100 oz tins.oz.	...	.34
Crystal.....oz.	.43	.46
Sulfate, 100 oz tins.....oz.	...	.23
Cinchonidin Sulfate, 100 oz tins .....oz.	.32	.35
Cincophen, U.S.P. kegs....lb.	...	2.75
Cocaine Alk, USP, 1 oz vial..oz.	...	11.07
Hydrochloride, USP,.....oz.	...	8.50
CODEINE Alk, 1 oz vials, 10 lots.....oz.	...	10.52
Hydrobromide.....oz.	...	8.92
Hydrochloride.....oz.	...	9.52
Nitrate, oz vl 10 oz lots....oz.	...	9.80
Phosp. oz vl, 10 oz lots....oz.	...	7.92
Salicylate.....oz.	...	8.25
Sulfate, oz vl, 10 oz lots...oz.	...	8.42
Colchicino Alk, USP, 1 oz vl.oz.	...	20.00
Salicylate, 1 oz vls.....oz.	...	35.50
Cream Tartar, USP, 300 lb bbls .....lb.	.21¾	.22
Imp. powd. 224 lb bbls....lb.	.21½	.21¾
Creosote, USP, 42 lb cbys....lb.	.45	.47
Carbonate, 150 lb.....lb.	1.50	1.60
Cresol, USP, 400 lb drums...lb.	...	.20
500 lb drums.....lb.	.14	.17
DIGITALIN Pure, 1 oz vial.oz	15.00	15.50
Dover's Powder, USP, 5 lb tin .....lb.	2.75	2.80
Duboisine Sulfate, 1 oz vl....oz.	35.00	40.00
Emetine Alk, 15 gr vial.....oz.	...	.85
Hydrochloride, USP, 1 oz vl .....oz.	25.00	26.00
15 grain vials.....oz.	2.50	2.70
Ephedrine, alk. 25 oz. tins,..oz.	2.90	3.45
Hydrochloride, 25 oz. tins, oz.	2.25	2.70
Sulfate, 25 oz. tins.....oz.	2.25	2.70
Epsom Salts, USP, 200 lb bbls .....100 lb.	2.25	2.50
Imp. 100 lb bbls.....100 lb.	2.30	2.35
Ergotin Bonjean, 1 lb jars...lb.	18.50	19.00
Eserine Alk, 1 oz vials.....oz	..	50.00
Salicylate, 1 oz vials.....oz.	..	40.00
Sulfate, USP, VIII 1 oz vials .....oz.	...	40.00
ETHER, USP, 55 lb drums..lb.	...	.11
Anaesthesia, 55 lb drums..lb.	.21	.23
Nitrous, 1 lb bot.....lb.	...	.80
Ethyl Chloride, 200 lb bot...lb.	.22	.24
Ethyl Iodide, 5 lb bot.....lb.	...	6.25
Formaldehyde, USP, 100 lb cbys lc-l wks.....lb.	.07	.07¼
Gall Extract.....lb.	.20	.21
GLANDULAR SUBSTANCES Duodenal Substance, 1 lb lots	...	5.50
Liver Substance (Hepatic) 1 lb lots.....	...	4.50
Orchic Substance (Testicular)	...	4.75
Ovarian Substance, whole, 1 lb lots.....	...	26.00
Ovarian Residue, 1 lb lots....	...	20.00
Pituitary Substance, whole 1 lb lots.....	...	40.00
Pituitary Substance, Anterior Lobe, 1 lb lots.....	...	27.00
Thyroid, U. S. P., 1 lb lots...	...	4.75
Oxgall Powder, 1 lb lots....	...	1.35
GLYCERIN, CP, 550 lb drums .....lb.	...	.11½
Gold Chloride, bottles.....oz.	12.00	12.50
Guaiacol, liq. USP. 100 lb cbys.....lb	1.65	1.75
Crystals.....lb	2.25	2.50
Benzoate, 1 lb bottles.....lb.	...	13.00
Carbonate, 5 lb boxes.....lb.	1.70	2.50
Halazone, 5 lb bot.....lb.	2.75	3.25
Hexamethylenetetramine, USP, 100 lb dr.....lb.	.46	.47
Homatropine Hydrobrom USP. .....oz.	...	14.50
5 oz and 1 oz vials.....oz.	...	13.50
Hydrastine Alk, USP, 1 oz vial .....oz.	20.50	21.00
Hydrochlide, USP, 1 oz vials .....oz.	20.50	21.00
Sulfate, 1 oz vial.....oz.		
Hydrastinine Hydrochloride, USP, 15 gr vials.....oz.	22.50	23.00
Hydrogen Peroxide, USP, soln 375 lb bbls.....lb.	...	40.00
Hyoscine Hydrobrom, USP, 1 oz vials.....oz.	.03½ ...	.04½ 35.00
5 oz, 1 oz vials.....oz.	13.07	13.57
Hyoscyamine Alk, crystals, 1 oz vials.....oz.	...	25.07
Amorphous, 1 oz vial...oz.	...	75.07

Hydrobromide, USP, 1 oz vial ..... oz.	...	25.00
Sulfate, 1 oz vial ..... oz.	...	25.07
Hypoquinone, 100 lb kegs ... lb.	...	1.10
ICHTHYOL, tins ..... lb.	4.00	4.25
Iodide Arsenous, 5 lb bot ... lb.	...	5.20
Arsenous-Mercuric soln, 5 lb bot ..... ql	...	.26
Iodine, crude, 200 lb kegs ... lb.	4.35	4.35
Resublimed, 10 lb tars ... lb.	4.65	4.70
Tincture demis ..... gal.	...	4.40
Iodoform, powd 10 lb bot ... lb.	...	6.50
Iron & Ammonium Citrate, USP, 50 lb cans ..... lb.	.65	.66
Chloride, USP, lump 400 lb bbls ..... lb.	.06	.08
Citrate, USP, VIII 25 lb can ..... lb.	.94	.99
Hypophosphite, 5 lb cans .. lb.	1.55	1.65
Iodide, 1 lb bottles ..... lb.	...	4.28
Phosphate, USP, 50 lb cans ..... lb.	...	.69
& Potas Oxalate, 250 lb bbl ..... lb.	...	.45
Pyrophosphate, USP, 50 lb ..... lb.	.74	.80
& Sod Oxalate, 50 lb cans .. lb.	...	.30½
Sulfate, USP, crys bbls .... lb.	.04	.04½
Ferrous dried bbls ..... lb.	...	.08
Valerate, tins ..... lb.	2.75	3.00
Jalap Resin, USP lumps, 5 lb tins ..... lb.	...	4.00
Powdered, tins ..... lb.	...	4.65
Lead Acetate, USP, 100 lb kegs ..... lb.	.16½	.19½
Iodide, USP, VIII 5 lb bot . lb.	3.20	3.40
Lecithin, 5 oz jars ..... oz.	1.00	1.30
Licorice Ext Mass, cases .... lb.	.19	.20
Compound powder, bbls ... lb.	.11	.13
LITHIUM CARBONATE, 250 lb bbls ..... lb.	1.35	1.45
Citrate, USP, 100 lb kegs .. lb.	...	1.70
Iodide, 5 lb bottles ..... lb.	...	5.65
Lobeline Sulfate, ¼ oz vial ... oz.	...	8.75
Magnesium Carbonate, USP, 100 lb bbls ..... lb.	.08	.09
English, oz blocks ..... oz.	.16	.18
Glycerophosphate, 5 lb tins ..... lb	3.20	3.25
Hypophosphite, 5 lb cans .. lb.	1.15	1.20
Salicylate, 100 lb kegs ..... lb	...	1.10
Stearate, bbls ..... lb.	.23	.25
Manganese Glycerophosphate, 5 lb tins ..... lb.	2.90	3.00
Hypophosphite, USP, VIII 5 lb cans ..... lb.	1.35	1.40
Iodide, 1 lb bottles ..... lb.	6.40	6.65
MENTHOL, USP, 60 lb cases ..... lb.	3.65	3.90
Synthetic, cases ..... lb.	3.00	3.10
Mercury Metal, 75 lb flasks .. fl.	78.00	80.00
Bichloride, crys 25 lb box .. lb.	...	1.36
Gran powd, 100 lb kegs .. lb.	...	1.21
Bisulfate, 25 lb boxes ..... lb.	...	1.48
Blue Mass, 25 lb boxes .... lb.	...	.89
Powd, 25 lb boxes ..... lb.	...	.90
Blue Ointment, USP, 50%, 25 lb cans ..... lb.	...	1.09
Mild 30%, 25 lb cans .... lb.	...	.79
33 1/3% mercury ..... lb.	...	.94
Calomel, 50 lb boxes ..... lb.	...	1.75
English ..... lb.	2.65	2.75
Iodide, green, 25 lb jars .... lb.	...	4.68
Red, USP 25 lb jars .. lb.	...	4.77
Yellow, USP, VIII, 25 lb jars ..... lb.	...	4.68
Red precip Powd. USP, 25 lb. boxes ..... lb.	...	1.90
White precip, Powd., USP, 25 lb. boxes ..... lb.	...	1.85
Salicylate, 25 lb bot ..... lb.	...	2.32
With chalk, USP, 25 lb boxes ..... lb.	...	.93
Methanol, Pure 1c-1 drs .... gal	...	.44
Methyl Salicylate, USP, 50 lb cans ..... lb.	.40	.42
Methylene Blue, USP, med 5 lb cans ..... lb	2.00	2.05
Milk powd, 150 lb bbls ..... lb.	.09	.12
MORPHINE Alk, 5 oz tin ... oz.	10.90	10.95
Acetate, 5 oz tins ..... oz.	8.75	8.80
Hydrobromide, 5 oz tins, 10 oz lots ..... oz.	8.75	8.80
Hydrochloride, 5 oz tins, 10 oz lots ..... oz.	8.75	8.80
Ethyl Hydrochloride, 5 oz tins 10 oz lots ..... oz.	...	10.85
Sulfate, 5 oz tins, 10 oz lots ..... oz.	7.85	8.00
Naphthalene Flake, 175 lb bbls wks ..... lb.	.04½	.05
Balls, 250 lb bbls wks ..... lb.	.05½	.06
Oxgall, Purified, 5 lb bot .... lb.	1.75	2.50
USP, 5 lb bot ..... lb.	2.00	2.50
Oxyquinoline Sulfate, tins ... lb.	8.50	9.25
Pancreatin, USP, 100 lb .... lb.	...	1.90
Paraffin, refd, 200 lb cs slabs 118 -120 deg MP ..... lb.	.08	.09
128-132 deg MP ..... lb.	.07½	.07½
Para-Aldehyde, USP, 100 lb carboys ..... lb.	.48	.50
Pepsin, USP, 100 lbs. 1:3000 lb.	...	2.25
100 lbs. 1:6000 ..... lb.	...	4.00
100 lbs. 1:10000 ..... lb.	...	6.50
Peptone, powd, 5 lb bot ..... lb.	...	...
PHENOBARBITAL, U. S. P., 1 lb. bot ..... lb.	9.50	10.00
Phenolphthalein, U. S. P. ... 100 lb drums ..... lb.	.80	.82
5 lb cans 100 lb lots .. lb.	.88	.93
Pilocarpine Hydrochloride, USP, 1 oz vials 25 oz lots ..... oz.	...	3.25
Nitrate, 25 oz lots ..... oz.	...	3.25
Single ounce ..... oz.	...	3.50
Alkaloid, 15 gr vials ..... vl.	...	.75
Piperadine, 25 oz bottles ..... lb.	...	8.00
Popodhyllin 5 lb bottles ..... lb.	4.35	4.50
Potassium Acetate, USP, 100 lb kegs ..... lb.	.29	.30
Bicarb, USP, crys 320 lb bbls ..... lb.	.09½	.10
Bromide, USP, crys 100 lb cs ..... lb.	.34	.35
Citrate, USP, 50 lb bbl .... lb.	.42½	.43
Guaiacol Sulfonate ..... lb.	1.95	2.25
Potassium Hypophosphite, 10 lb. cans ..... lb.	.75	.80
Iodide, USP, 100 lb cases .. lb.	3.50	3.55
Lactophosphate, 4 oz bot .. lb.	...	.90
Permangan, USP, crys, 100 lb drs wks ..... lb.	.15	.15½
Phosphate dibasic pure, kegs ..... lb.	...	.49
Salicylate, 25 lb cans ..... lb.	...	1.18
Sulfate, USP, VIII, 100 lb kegs ..... lb.	.13	.15
Sulfocyanide, CP 15 lb jars lb.	...	.50
Tartrate, CP, tins ..... lb.	...	.65
Pyrogallol, USP, see Acid Pyrogallic	...	...
Quinidine Alk, 100 oz tins ... oz.	.63	.68
Sulfate, 100 oz tins ..... oz.	...	.45
QUININE SULFATE, USP, 100 oz tins ..... oz.	...	.36
1 oz tins, 100 oz lots .... oz.	...	.46
Acetate ..... oz.	...	.72
Arsenate ..... oz.	...	.72
Benzoate ..... oz.	...	.73
Bisulfate, USP ..... oz.	...	.36
Citrate ..... oz.	...	.46
Dihydrobromide ..... oz.	...	.50
Dihydrochloride, USP .... oz.	...	.50
Ethyl Carbonate, 16 oz tins ..... oz.	...	.54
Ferrocyanide ..... oz.	...	.73
Formate ..... oz.	...	.67
Glycerophosphate ..... oz.	...	.86
Hydrobromide, USP ..... oz.	...	.45
Hydrochlorosulfate ..... oz.	...	.50
Hypophosphite ..... oz.	...	.65
Lactate ..... oz.	...	.66
Phenolsulfonate ..... oz.	...	.78
Phosphate ..... oz.	...	.55
Salicylate, USP ..... oz.	...	.48
Tannate, USP ..... oz.	...	.39
Tartrate ..... oz.	...	.73
Valerate ..... oz.	...	.78
Urea Hydrochloride, USP .. .. oz.	...	.52
Rennet, N. F. 5 lb 1:25,000 .. lb.	2.95	3.50
Resorcinol, USP, 25 lb cans .. lb.	1.57	1.65
Rochelle Salt, USP, 225 lb bbl ..... lb.	.16½	.17½
Rock Sugar, 5 lb boxes ..... lb.	...	.15
Saccharin, USP, 10 lb cans ... lb.	1.70	1.80
USP, Soluble, 10 lb cans ... lb.	1.75	1.85
Salicin, USP ..... lb.	...	12.50
SALOL, USP, 100 lb drums .. lb.	...	.90
Saltpetre, powd, bbls wks .... lb.	.06½	.08½
Santonin, USP, bulk ..... lb.	105.00	112.00
Saponin, refined ..... lb.	1.30	1.50
Siedlitz Mixture, 250 lb bb .. lb.	.13½	.14
Silver Metal, American ..... oz.	...	.29½
Iodide, 16 oz lots ..... oz.	...	.69
Nitrate, 100 oz bottles .... oz.	.22	.24
Nucleinate, bulk ..... oz.	...	.37
Proteinate ..... oz.	.39	.41
SODIUM BENZOATE, USP, 100 lb bbls ..... lb.	.44	.48
Bromide, USP, 100 lb kegs .lb.	.34	.35
Cacodylate, USP, 25 lb bot ..... lb.	4.75	5.90
Citrate, USP, X 50 lb kegs .lb.	.34½	.36
USP VIII, 50 lb kegs .... lb.	.28½	.30
Glycerophosphate, N.F., crys 25 lb cans ..... lb.	1.27	1.33
Powder, 25 lb tins ..... lb.	1.32	1.38
Soln, USP, 25 lb tins ... lb.	1.05	1.15
Hypophosphite, USP, 25 lb cans ..... lb.	.60	.65
Iodide, USP, 25 lb jars ... lb.	4.25	4.30
Phosphate (Mono-Sodium), 100 lb kegs ..... lb.	.30	.31
Di-Sodium USP, granular, 275 lb bbls ..... lb.	.07½	.08
Pyrophosphate, 100 lb kegs ..... lb.	...	.29
Salicylate, 100 lb kegs .... lb.	...	.47
Sulfocarbolate, USP, 100 lb kegs ..... lb.	...	.25
Sulfocyanate, CP crys, jars included ..... lb.	...	.60
Spartein Sulfate, USP, 25 oz bulk ..... oz.	.65	.70
Single oz vial ..... oz.	.77	.90
STRONTIUM BROMIDE USP, 50 lb kegs ..... lb.	.46	.47
Carb, 100 lb kegs wks .... lb.	...	.20
Iodide, USP, 25 lb jars .... lb.	...	4.00
Lactate, kegs ..... lb.	.90	1.10
Nitrate, 600 lb bbls NY ... lb.	.08	.08½
Imp. bbls NY ..... lb.	.08	.08½
Salicylate, USP, 100 lb keg lb.	...	1.10
Strophanthin, USP, 1 oz vial .oz.	19.00	19.00
Crystals ..... lb.	75.00	75.00
Strychnine Alk, USP crys, 100 oz tins ..... oz.	...	.61
Powdered ..... oz.	...	.51
Acetate ..... oz.	...	.65
Arsenate, 25 oz cans ..... oz.	...	.65
Glycerophosphite, USP .... oz.	...	.65
Hydrobromide ..... oz.	...	.65
Hydrochloride ..... oz.	...	.65
Hypophosphite ..... oz.	...	.75
Nitrate, USP ..... oz.	.55	.72
Phosphate ..... oz.	...	.65
Sulfate, USP, powd ..... oz.	...	.42
Sugar, refined, 275 lb bbl 100 lb	5.80	5.90
Milk, USP, 200 lb bbls ... lb.	.18	.20
Sulfonethylmethane, USP, 10 lb boxes ..... lb.	3.85	4.05
Sulonmethane, USP, 10 lb box ..... lb.	2.65	3.85
Sulfur flwrs. washed, USP, 125 lb bbl ..... lb.	...	.06
Iodide, USP, VIII, 5 lb bot lb.	...	4.55
TARTAR EMETIC, USP, 300 lb bbls ..... lb.	.29	.31
Terebene, tins ..... lb.	...	.85
Terpin Hydrate, USP, 100 lb kegs ..... lb.	.35	.37
Theobromine Alk, 5 lb cans .. lb.	1.90	2.25
Sod. Salicylate, 1 lb bot ... lb.	...	2.10
Sod. Benzoate, 1 oz vials .. oz.	...	1.00
Thymol, USP, 25 lb tins ..... lb.	1.65	1.90
Iodide kegs ..... lb.	6.00	7.00
Veratrine Alkaloid ..... oz.	...	2.25
Sulfate, 1 oz vials ..... oz.	...	2.25
Witch Hazel Ext., 50 gal bbl ..... gal.	.60	.80
Zinc Carb, USP, 100 lb keg .. lb.	.28	.31
Chloride, USP, 25 jars ex .. lb.	.24	.29
Iodide, 5 lb bottles ..... lb.	...	5.22
Oxide, USP, 100 lb bbls ... lb.	.13	.14
Stearate, USP, 50 lb bbl .. lb.	.18	.20
Sulfate, USP, 100 lb bbl .. lb.	.08	.09
Sulfocarbolate, 100 lb kegs .. lb.	.23	.26

Miscellaneous

Castor Oil, odorless, bbls ..... lb.	...	.13½
Chalk drop, 175 lb. bbls ..... lb.	...	.03½
Precip. light, 250 lb. cask .. lb.	...	.04½
Heavy 540 lb. casks ..... lb.	...	.02½
Bulk ..... ton	...	5.00
English light, bags ..... lb.	...	.04½
English light, casks ..... lb.	.05½	...
Cocoa Butter, 12 lb. box .... lb.	.42	.45
Cod Liver Oil Nor. 30 gal. bbls	27.00	28.00
Newfoundland ..... bbl.	...	31.00
Collodion U. S. P. 30 lb. dr ... lb.	...	.23
Colors, certified; 1 lb. cans, 5 lb. cans		
Amaranth No. 107 ..... lb.	2.50	2.60
Brilliant Blue F.C.F. ..... lb.	12.75	13.00
Erythrosine No. 517 ..... lb.	16.50	17.00
Orange Ind. 85 ..... lb.	2.50	2.60
Ponceau 3R No. 56 ..... lb.	4.75	5.00
Tartrazine No. 94 ..... lb.	2.50	2.60
Corn Syrup 42° 50 gal. bbl. ..... 100 lb.	3.91	4.16
Gelatin, USP, Silver 100 lb. cases ..... lb.	.55	.60
Pure Food, 50 lb. bbl. .... lb.	.53	.55
Glucose, (grape sugar) dry 70° bags c-1 NY ..... 100 lb.	3.14	3.24
Haarlem Oil, bot 6 gross cases ..... gross	...	3.75
Imported, 5 gr. cs ..... gross	...	3.50
Kaolin, Bags ..... lb.	.06	.08
Colloidal Grade 200 lb. tin lined wooden drums .... lb.	.15	.29
Mineral Oil White, 50 gal. bbls. 80-85 vis. ..... gal.	.45	.50
85-90 vis. ..... gal.	.65	.70
125-130 vis. ..... gal.	.75	.85
290 vis. ..... gal.	.80	.90
Russian 110-115 vis. ..... gal.	.69	.79
145-155 vis. ..... gal.	.70	.75
320-330 vis. ..... gal.	.80	.90
Olive Oil, Edible bbls ..... gal.	1.55	1.65
Paraffin Wax, fully refined, slabs 125 @ 127 A.M.P. bags lb.	...	.03
130 @ 132 A.M.P. bags lb.	...	.04½
135 @ 137 A.M.P bags lb.	...	.05
Petrolatum, Lily White, USP, 400 lb. bbl ..... lb.	.08	.08½
Snow White USP, 400 lb. bbls ..... lb.	.09	.11
Rice Starch, 140 lb bags .... lb.	.09	.10
Soap Castile, bars 40 lb. Case ..... Cs.	...	12.75
Powd. USP 250 lb. bbls ... lb.	.26	.28
Green, USP, 450 lb. bbls ... lb.	.07½	.07½
Neutral, powd. 200 lb. bbls. lb.	.18	.20
Talc, Italian, 220 lb bags ... ton.	60.00	80.00
French, 220 lb bags ..... ton.	40.00	45.00

Aromatics and Essential Oils

Acetophenene, CP, 1 lb bot..lb.	3.50	3.65
Aldehyde, C 8 (Otcyl) 1 lb bot ..lb.	...	40.00
C 7, 1 lb bot..lb.	4.50	5.50
C 9 (Nonyl), 1 lb bot ...lb.	...	120.00
C 10 (Decyl), 1 lb bot...lb.	...	38.00
C 14, 1 lb bot..lb.	...	22.00
C 16, 1 lb bot..lb.	...	20.00
AMYL ACETATE, pure, 25 lb cans..lb.	.43	.50
Butyrate, 1 lb bot..lb.	1.25	1.50
Butyrate, 5 lb bot..lb.	...	1.00
Cinnamate, 5 lb bot..lb.	9.50	9.75
Formate, 1 lb bot..lb.	...	1.90
Formate, 5 lb bot..lb.	...	1 75
Phenyl Acetate, 1 lb bot...lb.	4.50	5.00
Salicylate, 100 lb cbys...lb.	1.25	1.30
Imported..lb.	2.25	2.50
Anethol, 2 lb bot..lb.	1.10	1.35
Anisic Aldehyde, 1 lb bot...lb.	3.10	3.60
Benzaldehyde, USP, 40 lb cbys ..lb.	...	...
50 lb cbys..lb.	1.35	1.45
FFC, 40 lb cbys..lb.	1.25	1.35
Benzoic Ether, see Ethyl Benzoate		
Benzophenone, 1 lb bot..lb.	2.25	2.75
Benzyl Acetate, 100 lb cbys..lb.	.65	.85
Alcohol, 5 lb bot..lb.	.85	.95
BENZYL BENZOATE.....	1.10	1.15
Medicinal, FFC..lb.	...	1.40
Buytrate, CP, 1 lb bot...lb.	9.25	9.50
Benzyl Cinnamate, 1 lb bot. lb.	7.00	7.25
Formate, 1 lb bot..lb.	3.15	3.25
Propionate, 1 lb bot..lb.	2.50	2.65
Succinate, 1 lb bot..lb.	5.25	5.50
Valerate, 5 lb bot..lb.	3.00	3.25
Borneol, 1 lb bot..lb.	1.35	1.85
Bornyl Acetate, 1 lb bot...lb.	1.70	2.80
Bromstyrol, 25 lb cases..lb.	3.75	3.85
Butyl Anthranilate dom, 1 lb bot..lb.	...	...
Carvol, 5 lb bot..lb.	3.00	3.40
Cinnamic Acid, 5 lb cans...lb.	3.25	3.50
Alcohol liquid, 1 lb bot...lb.	2.50	2.60
Crystallizable..lb.	7.00	8.00
Aldehyde..lb.	2.25	2.50
Imported, 1 lb bot..lb.	7.75	9.00
Citral, 25 lb cans..lb.	2.00	3.35
Citronellal 1 lb bot..lb.	2.00	4.00
Citronelyl Acetate, 1 lb bot..lb.	4.25	4.50
Coumarin, 25 lb cans..lb.	3.50	4.00
DECYL ALCOHOL.....lb.	22.00	25.00
Diphenyloxide, 25 lb tins...lb.	1.00	1.15
Diphenyl Methane..lb.	1.75	2.00
Duodecyl Alcohol..lb.	20.00	22.00
Ethyl Acetate, pure, 5 lb bot..lb.	.06	.07
Benzoate, 5 lb bot..lb.	1.50	1.75
Ethyl Butyrate, 5 lb bot...lb.	1.80	2.00
Caproate, 1 lb bot..lb.	3.25	3.50
Cinnamate, 1 lb bot..lb.	4.00	4.50
Formate, 5 lb bot..lb.	1.00	1.25
Methyl Paracresol, 1 lb bot ..lb.	3.25	3.50
Phenyl Acetate, 5 lb bot..lb.	3.75	4.00
Valerate, 5 lb bot..lb.	...	3.75
Salicylate, 5 lb bot..lb.	1.95	2.00
Eucalyptol, USP, 50 lb cans..lb.	.60	.65
Eugenol, USP, 25 lb cans...lb.	3.00	3.50
Geraniol, 50 lb cases..lb.	1.75	2.35
Geranyl Acetate, 1 lb bot...lb.	2.75	2.80
Butyrate, 1 lb bot..lb.	13.00	13.50
Formate, 1 lb bot..lb.	12.00	12.50
Heliotropin, 100-10 lbs..lb.	1.65	1.75
Imported..lb.	1.95	2.05
Hydroxycitronellal, 1 lb..lb.	5.00	7.00
Indol, CP, 1 oz bot..oz.	2.90	3.00
IONONE, 1 lb bot 100%...lb.	5.00	6.00
Alpha..lb.	4.50	4.70
Beta..lb.	5.70	5 75
Methyl..lb.	5.00	5.25
Iso Borneol..lb.	2.25	2.35
Iso Bornyl Acetate..lb.	3.00	3.20
Iso-Butyl Benzoate, 5 lb bot..lb.	2.75	3.00
Iso-Eugenol, 1 lb bot..lb.	3.50	3.55
Iso-Safrol, 1 lb bot imp...lb.	1.75	1.85
Domestic, 5 lb bot..lb.	3.50	3.75
Linalol from Bois de Rose, 5 lb bot..lb.	1.90	3.90
Linalyl Acetate, 1 lb bot...lb.	2.00	3.00
Benzoate, 1 lb bot..lb.	13.00	14.00
Formate, 5 lb bot..lb.	10.50	12.00
METHYL ACETOPHENONE ..lb.	2.70	2.85
Anthranilate, 1 lb bot...lb.	2.25	2.30
Imported..lb.	2.70	2.75
Anthranilic Acid..lb.	11.75	12.00
Benzoate, 5 lb bot imp...lb.	1.75	1.85
Domestic, 5 lb bot...lb.	1.75	2.00
Cinnamate, 1 lb bot...lb.	3.75	4.25
Heptenone, 1 lb bot...lb	3.50	4.00
Paracresol, 1 lb bot...lb	4.50	8.00
Phenylacetate, 5 lb bot...lb	3.75	4.00
Salicylate, USP, 500 lb dr .lb.	...	.40
50 lb cases..lb.	...	.42
Mirbane rect. 1,000 lb drs...lb.	.12	.13
Musk Ambrette 1 lb cans...lb	6.75	7.00
Ketone 1 lb cans..lb	7.55	7.80
Xylene 5 lb cans..lb.	2.25	2.85
Nerolin 1 lb cans..lb.	1.35	1.40
Octyl Alcohol 1 lb bot..lb.	16.00	18.00
Oenanthic Ether lb bot...lb.	1.90	2.00
Oleoresin Aspidum..... USP, bot and tins..lb.	...	1.25
Capsicum, USP, bot and tins ..lb.	2.75	3.50
Cubeb, USP, bot and tins..lb.	3.00	3.25
Ginger bot and tins..lb.	2.35	2.85
Malefern see Aspidum.....		
Orris, bot & tins..lb.	15.00	18.00
Pepper, black, USP, bot & tin ..lb.	...	9.50
Vanilla, bot & tins..lb.	8.00	8.75
Paracresol Methyl Ether...lb.	4.25	4.50
Paracresyl Acetate..lb.	5.50	5.75
Para Cymene Refd 110 gal dr ..gal.	2.25	2.50
PHENYLACETALDEHYDE 50% 1 lb bot..lb.	4.75	5.00
Imported 50%..lb.	4.75	5.00
100%..lb.	8.00	8.25
Phenylacetic Acid 1 lb bot..lb.	2.65	2.90
Phenyl Diacetate 1 oz bot...oz.	3.00	3.25
1 lb bot..lb.	8.00	10.00
Imported..lb.	7.00	7.75
Phenylethyl Alcohol 1 lb bot.lb.	4.40	4.65
Phenyl Ethyl Acetate..lb.	8.25	8.75
Butyrate 1 lb bot..lb.	15.00	16.00
Formate, 1 lb bot..lb.	19.00	21.00
Propionate, 1 lb bot..lb.	16.00	18.00
Valerate, 1 lb bot..lb.	19.00	20.00
Phenylpropylalcohol, 1 lb bot ..lb.	8.50	9.00
Rhodinol, 1 lb bot..lb.	6.25	20.00
Saffrol, drums..lb.	.30	.32
60 lb cans..lb.	.32	.34
Skatol, 1 oz bot..lb.	4.50	7.00
Terpinyl Acetate, 25 lb cans..lb.	.85	.90
Imported, 25 lb cans.....	.85	.90
TERPINEOL, CP, 1000 lb drs ..lb.	.27	.29
50 lb cans..lb.	.31	.33
Absolute, 25 lb cans..lb.	.48	.50
Imported, 25 lb cans...lb.	.58	.60
Valerianic Ether see Ethyl Valerate.....		
Vanillin (Clove Oil), USP..lb.	5.50	5.75
(Guaiacol) USP..lb.	5.00	5.25

Essential Oils

Almond Bitter, USP, 5 lb bot lb.	2.25	2.35
Bitter, ffPA, 5 lb bot..lb.	2.35	2.50
Sweet, 56 lb cans..lb.	.42	.45
Almond Meal, 25 lb cans...lb.	.20	.21
Amber crude, 25 lb tins..lb.	.15	.17
Rectified, 25 lb tins..lb.	.50	.53
Amber liquid, 400 lb drs..lb.	2.20	2.30
Ambergris, Black, boxes...oz.	14.00	15.00
Gray boxes..oz.	32.00	36.00
Angelica Root, 1 lb bot..lb.	25.00	35.00
Anise Tech, 400 lb drums...lb.	.40	.42
USP, 60 lb cans..lb.	.42	.44
Apricot Kernel, 50 lb cans...lb.	.26	.27
Bay, 25 lb tins N. F. V., 50.55% Phenol..lb.	1.80	1.95
Terpeneless..lb.	4.25	4.45
BERGAMOT, 25 lb coppers.lb.	1.75	2.10
Terpeneless..lb.	6.25	9.25
Artificial, 25 lb cans..lb.	1.25	1.50
Birch, Sweet, Northern, 25 lb tins..lb.	3.00	3.10
Southern, 25 lb tins..lb.	...	1.85
Birch Tar, rect., 5 lb bot...lb.	.50	.55
Crude, 50 lb tins..lb.	.13	.14
Bois de Rose, tins Brazillian..lb.	.60	.65
Cayenne, tins..lb.	1.25	1.45
Cade, 25 lb cans..lb.	.25	.26
Cajuput, native, 50 lb tins..lb.	.57	.62
Calamus, 5 lb bot..lb.	2.75	3.00
Camphor Sassa, 1000 lb drs..lb.	.21	.22
White, 400 lb drs..lb.	.17	.18
Cans, 50 lbs..lb.	.19	.20
CANANGA, Native 25 lb tins ..lb.	1.75	1.90
Rectified, 25 lb tins..lb.	2.10	2.20
Caraway, USP..lb.	1.50	1.65
Cardamon, NF, 1 lb bot...lb.	16.00	21.00
Cascarilla, USP, 1 lb bot...lb.	65.00	80.00
Cassia, ... Redist, USP, 50 lb cans...lb.	... .95	... 1.00
Cedar Leaf, 50 lb tins..lb.	.85	1.00
Cedar Wood, light, 1000 lb drs ..lb.	.32	.34
Celery, 1 lb bot..lb.	...	7.50
Chaulmoogra, USP 80 lb cases lb.	...	1.50
Cinnamon Ceylon, 1 lb bot...lb.	9.00	10.00
Leaf, 5 lb bot..lb.	1.85	1.95
CITRONELLA Ceylon, 1000 lb drs..lb.	.36	.37
50 lb tins..lb.	.37	.39
Java, 400 lb drs..lb.	.55	.57
50 lb tins..lb.	.57	.59
Civet, Abyssin, horns..oz.	2.10	3.00
Cloves, USP, 50 lb cans...lb.	1.15	1.20
6 lb bot..lb.	1.25	1.30
Copaiba..lb.	.45	.50
Coriander, USP, 10 lb bots..lb.	4.50	4.75
Croton USP, 25 lb tins...lb.	4.00	4.50
Cubebs, USP, 5 lb bot...lb.	2.55	2.65
Cumin, 1 lb bot..lb.	7.00	7.50
Dill, 25 lb cans..lb.	3.15	4.65
Erigeron, 20 lb tins..lb.	1.00	1.10
EUCALYPTUS Austl, USP, 56 lb cans, cases..lb.	.30	.31
500 lb drs..lb.	.28	.29
Fennel, USP, 25 lb tins...lb.	.95	1.10
Geranium African, 25 lb tins..lb.	4.00	4.90
Bourbon, 28 lb tins..lb.	3.80	4.00
Turkish, 28 lb tins..lb.	2.10	2.25
Ginger, 1 lb bot..lb.	4.35	4.50
Gingergrass, 28 lb tins...lb.	2.50	2.70
Grape Fruit..lb.	2.90	3.00
Hemlock, 25 lb tins..lb.	1.00	1.05
Juniper Berries, USP, 25 lb tins ..lb.	1.50	1.55
Wood, 50 lb tins..lb.	.50	.60
Labdanum, 5 lb bot..lb.	5.50	6.00
LAVENDER, USP, 28 lb tins ..lb	1.90	2.10
Spike Spanish, 50 lb cans..lb.	.43	.48
Lemon Ital, 25 lb cans..lb.	1.00	1.05
California 35 lb cbys...lb.	.80	.90
Lemongrass, native, 50 lb cans ..lb.	.65	.67
Limes, expressed, 25 lb tins..lb.	11.50	13.50
Distilled, 25 lb tins..lb.	9.00	10.00
Linaloe Mex., 70 lb cases...lb.	...	1.75
Mace, distilled, 50 lb tins...lb	1.10	1.15
Mandarin, 25 lb cases..lb.	4.20	4.70
Musk Pods Cabardine, tins..lb.	...	...
Musk Tonquin, tins, Pods...oz.	24.00	26.00
Grains Cabardine, tins...oz.	...	...
Tonquin, tins, Grained..oz.	28.00	34.00
MUSTARD, USP, 1 lb bots.lb.	9.50	10.00
Artif, USP, 5 lb bot..lb.	1.55	1.65
Neroli Bigarade, ½ & ¼ & 1 lb bot ..lb.	80.00	110.00
Petale, 1 lb bot..lb.	95.00	105.00
Artificial, 1 lb bot..lb.	5.00	15.00
Nutmeg, USP, 50 lb tins...lb	1.05	1.10
ORANGE BITTER, 25 lb tins ..lb	1.80	2.05
Sweet W Ind, 25 lb tins..lb	1.65	1.80
Italian, 25 lb cop..lb	1.80	2.05
Orange American, Cold pressed 25 lb tins..lb.	1.85	1.90
Distilled, 25 lb tins...lb.	1.00	1.05
Spanish, 25 lb tins..lb.	...	2.25
Oil Orris, concrete..oz.	4.75	5.00
Origanum, 50 lb cans tech...lb.	.25	.27
Parsley, 1 lb bot..lb.	6.50	6.75
Patchouli, 5 lb bot..lb.	4.50	4.85
Pennyroyal, dom, 25 lb tins...lb.	1.75	1.95
Imported, 25 lb tins..lb.	...	1 05
Pepper Black lb.,.....		6.00
Peppermint, nat. 60 lb cases lb.	1.50	1.60
Redis, USP, 60 lb cs..lb.	1.70	1.80
Petit Grain S A., 25 lb tins..lb.	1.10	1.20
French, 1 lb bot..lb.	4.50	4.75
Italian, 25 lb tins..lb.	2.20	2.30
Pimento Leaf, 25 lb tins ...lb.	1.50	1.65
Berries, 25 lb tins ..lb	3.00	3.10
Pine Needle Siberian, cans..lb.	.60	.65
Pinus, Sylvestris, 25 lb tins..lb.	1.30	2.00
Pumilio, USP, 25 lb tins...lb.	1.90	1.95
Rose Fr, 8, 16, & 32 oz pkgs..lb.	14.00	17.00
Bulg, 8, 10 & 32 oz pkgs...oz.	9.00	10.00
Rosemary, USP, 27½ lb tins..lb.	...	.44
1000 lb drums..lb.	...	.43
Tech, 25½ lb tins..lb.	...	.37
Rue, 1 lb bot..lb.	3.00	3.10
SANDALWOOD, E Ind ,USP, 100 lb case..lb.	7.00	7.25
W Indian (Amayris), 25 lb tins..lb.	2.85	2.95
Australian, Tins.....	5.65	5.65
Sassafras, USP, 50 lb cans...lb.	1.05	1.07
Artificial, 1000 lb drs, 60 lb cans..lb.	.27	.29
Safrol, cans..lb.	.36	.38
Sage, Dalmatian, 25 lb. cans.lb.	2.25	2.35
Savin, 50 lb tins..lb.	2.10	2.35
Snakeroot, Canada..lb.	8.25	8.50
SPEARMINT, USP, 50 lb tins ..lb	1.30	1.40
Spruce, 50 lb tins..lb	.95	1.00
Tansy, American, 25 lb tins..lb.	2.20	2.35
Tar, 50 gal bbls..lb.	.25	.30
USP, 50 gal bbls..lb.	.75	1.50
Thyme, red, NF, 25 lb tins...lb.	.65	.68
White, NF, 25 lb tins...lb.	.83	.85
Tech, 110 lb drums...lb.	.60	.70
Turpentine, USP, rect cbys..lb.	.27	.30
Vetivert Bourbon, 10 bot...lb.	4.75	5.00
Indian, 1 lb bot..lb.	25.00	38.00
Java, 1 lb bot..lb.	12.00	13.00
Wine, heavy, 1 lb bot..lb.	1.50	1.60
WINTERGREEN Gaultheria, true, 25 lb tin..lb.	8.00	10.00
Southern, 25 lb tins...lb.	3.75	4.00
Synthetic see Methyl salicylate.....		
Wormseed, Balt, 25 lb tins...lb.	2.75	2.90
Wormwood, dom, 25 lb tins..lb.	4.25	4.50
Ylang Ylang Bourbon, 10 lb tins No. 1..lb.	5.25	5.50
10 lb tins No. 2...lb.	5.20	5.25
Manila, 1 lb bot..lb.	30.00	36.00

Drugs and Spices

Aconite Root, USP, bags	lb.	.13 .14½
Agar Agar, No. 1, bales	lb.	1.20 1.25
Agar Agar No. 2, bales	lb.	1.15 1.17
Almonds Meal	lb.	.25 .30
Aletris Root, bags	lb.	.20 .21
Alkanet Root, bags	lb	.09 .10
ALOES, Cape, 400 lb cases.	lb.	.11 .12
Curacao, 100 lb cases	lb.	.21 .23
Socotrine, Whole, 300 lb cs	lb.	.32 .37
Althea Root, bags	lb.	.20 .22
Cut cases	lb.	.18 .25
Angelica Root, bags	lb.	.12 .13
Angostura Bark, bags	lb.	.18 .19
Anise Star case	lb	.13 .14
Spanish, bags	lb	.07½ .08
ARABIC GUM, White, No. 1, 220 lb bags	lb.	.20 .21
Seconds, 220 lb bags	lb.	.19 .20
Sorts, Amber, 220 lb bags	lb.	.08½ .08¾
Powd, USP, 300 lb bbls	lb.	.14 .17
Areca Nuts, 100 lb bbls	lb.	.05 .07
Powd, 100 lb bbls	lb.	.10 .11
Arnica Flowers, bales	lb.	.10 .11
Root, bags	lb.	.42 .43
Arrowroot, St. Vincent, powd bbls	lb.	.08 .09
Asafoetida, 250 lb cases	lb.	.18 .19
Powd, 50 lb boxes	lb.	.34 .35
Balm Gilead Buds, bags	lb.	.26 .27
Balmony Herbs, bales	lb.	.13 .15
BALSAM COPAIBA Para, 80 lb cases	lb.	... .20
South American, USP, 80 lb cases	lb.	... .24
Peru, 120 lb cases	lb.	1.25 1.30
Tolu, 90 lb cases	lb.	.65 .70
Barberry Bark, of root, bags	lb.	.16 .18
Bayberry Bark, bales	lb.	.07 .08
Wax bbls	lb.	.18 .20
BELLADONNA LEAVES, bale	lb.	.13 .15
Root, bags	lb.	.11 .12
Bees Wax, White, cases	lb.	.38 .42
Yellow refined cases	lb.	.26 .28
Yellow Crude Cases	lb.	.21 .23
Benzoin Gum, Siam, boxes	lb.	1.15 1.25
Sumatra, cases	lb.	.26 .27
Berberis Aquafolium Root, bags	lb.	.08 .09
Beth Root, bags	lb.	.09 .10
Black Indian Hemp Root, 100 lb bags	lb.	.11 .12
Blood Root, bags	lb.	.11 .12
Blueflag Root, bags	lb.	.13 .14
Boldo Leaves, bales	lb.	.15 .17
Boneset Herb, bales	lb.	.08 .09
Borage Flowers, bales	lb.	.12 .13
Broomtop Herb Cut, bales	lb.	.07 .08
Bryonia Root, bags	lb.	.09 .10
BUCHU LEAVES Short, 250 lb. bales	lb.	.16½ .17½
Long bales	lb.	.75 .80
Buckbean Leaves, bales	lb.	.08½ .09
Buckthorn Bark, bags	lb.	.04½ .05
Berries, bags	lb.	.29 .34
Burdock Root, bags	lb.	.08 .09
Seed bags	lb.	.30 ...
Burgundy Pitch, 110 stand gross for net	lb.	.08 .09
Imported	lb.	.10 .11
Calabar Beans, bags	lb.	.15 .16
Calamus Root, blchd cases	lb.	.30 .33
Unbleached, bags	lb.	.07 .08½
Calendula Petals, imp bales	lb.	.30 .35
Calisaya Bark, bales	lb.	.19 .20
Powdered, bbls	lb.	.25 .26
Canary Seed, South America, bags	lb.	.05 .05½
Dutch, bags	lb.	.05 .06
Candelilla Wax, bags	lb.	.14 .16
Cannella Alba Bark, bales	lb.	.25 .26
Cannabis, U.S.P.	lb	.18 .25
Cantharides, Chinese, cases	lb.	.40 .45
Powdered, boxes	lb.	.60 .63
Russian, cases	lb.	.75 .80
Powdered, boxes	lb.	.90 .95
Caraway Seed, African, bags	lb.	.04¾ .05¾
Dutch, 11 lb bags	lb.	.06¼ .06½
Cardamon bleached, cases	lb.	1.05 1.10
Decorticated, cases	lb.	.54½ .55
Cascara Amarga, 150 lb bbls	lb.	Nom ...
So called bales	lb.	.50 .75
CASCARA SAGRADA, 1929 bark	lb.	.17 .18
1930 bark	lb.	.16½ .18
1931 bark	lb.	.11½ .12½
Cascarilla Bark, quills, bales	lb.	.80 .90
Siftings, bbls	lb.	.65 ...
Cassia Batavia No. 1 bbls	lb.	.07 .07½
Shortstick, bales	lb.	.06½ .06½
Batavia No. 3, bales	lb.	.05½ .06
China Select Rolls, cases	lb.	.02½ .03
Broken, bales	lb.	.05½ .05¾
Saigon, thin	lb.	.20 .21
Buds, cases	lb.	.20 .25
Fistula, baskets	lb.	.09 .10
Catnip, Herb, bales	lb.	.16 .17
Celery Seed, bales	lb.	.16 .16½
Ceresin Wax, White, bags	lb.	.10 .15
Yellow 200 lb. bags	lb.	.09 .12
Imp. 100 lb. bags	lb.	.25 .38
CHAMOMILE FLOWERS Roman, bales	lb.	.32 .35
Hungarian, cases	lb.	.14 .15
Charcoal Willow, powd, bbls	lb.	06 .06½
Wood, powd, bbls	lb.	.04 .05
Chestnut Bark	lb.	.07 .08
Leaves bales	lb.	.05 .05½
Chicle Gum, lb bbls	lb.	.58 .75
Chiretta, bales	lb.	.15 .18
Cinnamon, Ceylon, No. 1, bales	lb.	.15 .16
No. 2 bales	lb.	.12 .12½
No. 3 bales	lb.	.11½ .12
Clover Tops, Red, bags	lb.	.08 .09
Cloves Zanzibar, 135 lb bbl	lb.	.18 .18¼
Cochineal, Black	lb.	.69 ...
Silver	lb.	.85 ...
Cohosh Root, Black, bags	lb.	.05 .06
Blue, bags	lb.	.06 .07
Colchicum Root, bags	lb.	.07 .08
Seed, bags	lb.	.65 .70
COLOMBO ROOT, bags	lb.	.05 .06
Colocynth Pulp, bales	lb.	.18 .19
Coltsfoot Leaves, bags	lb.	.06 .07
Comfrey Root, bags	lb.	.10 .11
Condurango Bark, bags	lb.	.09 .10
Coriander Seed, Morocco, bags	lb.	.03½ .04
Bleached, bags	lb.	.05½ .06
Corn Silk, bales	lb.	.05½ .06½
Cotton Root Bark, bales	lb.	.06½ .07½
Cowhage, 1 oz tins	lb.	1.00 ...
Cramp Bark so called bales	lb.	.05 .06
True, bags	lb.	.27 .29
Cranesbill Root, bags	lb.	.07½ .08
CUBEB BERRIES, XX bags	lb.	.32 .33
Powdered, boxes	lb	.34 .35
Culvers Root, bags	lb.	.11 .12
Cumin Seed, Malta, bags	lb.	.12½ .12¾
Morocco, bags	lb.	.06½ .07
Cuttlefish, Bone Trieste, Straps	lb.	.19 .22
French, boxes	lb.	.18 .21
Powdered, bbls	lb.	.09 .10
Broken, bales	lb.	.07 ...
Damiana Leaves, bales	lb.	.15 .16
Dandelion Root, Imp. bags	lb.	.11 .12
Deer Tongue Leaves, bales	lb.	.10 .12
Digitalis Leaves, bales	lb.	.11 .12
Dogwood Bark, Jamaica bags	lb.	.08 .09
American bales	lb.	.06½ ...
Doggrass Root, USP, cut bags	lb.	.14½ .15
Dragons Blood Mass, cases	lb.	.65 .70
Reeds, boxes	lb.	.90 .95
Echinacea Root, bags	lb.	.16 .17
Elcampane Root, bags	lb.	.05 .06
Elder Flowers, bags	lb.	.21 .24
Elemi Gum, 85 lb cases	lb.	.26 .28
Elm Bark, bundles	lb.	.19 .22
Grinding bags	lb.	.09 .10
Powdered, bbls	lb.	.16 .18
Ephedra Vulgaris, bales	lb.	.06 .07
ERGOT, 150-200 lb bags	lb.	.45 .63
Eucalyptus Leaves, bales	lb.	.05 .06
Euphorbia Pilulifera, Herb, bags	lb	.05 .08
Euphorbium Gum, cases	lb.	.14 .20
Fennel Seed, French, bags	lb.	.07 .07½
German bags	lb.	.08 .10
Foenugreek Seed, 200 lb bags	lb.	.04 .04½
Fish Berries, 100-125 lb bag	lb.	.06 .07½
Flax Seed, Whole 182 lb bbls		14.50 15.25
Ground, 180 lb bbls	lb.	.06 .06¼
Fringe Tree Bark or Root bags	lb.	.11 .13
Fumigating Pastiles, boxes	lb.	.28 .33
Galangal Root, bags	lb.	.08 .09
Galbanum Gum, cans	lb.	.90 1.00
Gamboge Gum, 100 lb cases	lb.	.70 .75
Powdered, cases	lb.	.80 .85
Gelsemium Root, bags	lb.	.06 .07
GENTIAN ROOT, bags	lb.	.07 .08
Ground bbls, boxes	lb.	.10 .11
Powdered, bbls, boxes	lb.	.10 .11
Ginger, African, bags	lb.	.06¼ .06¾
Jamaica Grinding bags	lb.	.09 .09½
Cochin ABC & Lemon, bags	lb.	.12 .12½
Ginseng Root, cultivated cs	lb.	8.00 10.00
Wild Southern, cases	lb.	... 16.00
Golden Seal Root, bags	lb.	1.00 1.05
Powdered, boxes	lb.	1.35 1.40
Herb, barrels	lb.	1.25 1.30
Grains of Paradise, bags	lb.	.11 .14
Grindelia Robusta, Herb, bale	lb.	.07 .08
Guaiac Gum, 150 lb cases	lb.	.25 .26
Strained 75 lb cases	lb.	.70 .75
Guarana, tin cases	lb.	1.00 1.25
Hellebore Root, Black, bbls	lb.	.05½ .06
White, 250 lb bbls	lb.	.07¾ .08½
Powdered	lb.	.11 .12
Helonias Root, bags	lb.	.28 .30
Hemp Seed, bags	lb.	.03½ .03¾
Henbane Leaves, USP, bales	lb.	.09 .10
HENNA LEAVES, bales	lb.	.07½ .08½
Powdered	lb.	.12 .13
Hops, bales	lb.	... .23
Horehound, Herb, bales	lb.	.07 .08
Hydrangea Root, bales	lb.	... .06
IPECAC ROOT, Carteagna, bags	lb.	1.15 1.20
Powdered, 220 lb bbls	lb.	1.30 1.40
Isinglass, American, 130 lb cases	lb.	.95 1.00
Russian (Beluga), boxes	lb.	4.50 ...
Jaborandi Leaves, bales	lb.	.07½ .08
Jalap Root, Whole, 150 lb bag	lb.	.18 .20
USP, Powd, 250 lb bbls	lb.	.23 .26
Japan Wax 224 lb. cases	lb.	.08 .08¼
JUNIPER BERRIES, 125 lb bags	lb.	.04¾ .05¼
Kamala, boxes	lb.	.45 .52
Karaya Gum, Powdered, bbls	lb.	.12 .20
Kava Kava Root, bags	lb.	.13 .14
Kino Gum, Black, cases	lb.	.50 .55
Kola Nuts, 150 lb bags	lb.	.06 .06½
Lady Slipper Root, bags	lb.	.40 .45
Larkspur Seed, bags	lb.	.30 .35
Laurel Berries, bags	lb.	.08 .09
Leaves, Greek, bags	lb.	.05 .05½
Italian, bales	lb.	.08 .09
Lavender Flowers, Ordinary	lb.	.18 .20
Selected	lb.	.29 .31
Lemon Peel, bags	lb.	.08 .09
LICORICE ROOT, Whole bbls	lb.	.12 .15
Spanish Natural bales	lb.	.05½ .07
Powdered, bbls	lb.	.08 .10
Selected 2 & 5 lb bdls	lb.	.12 .15
Cutting, 125 lb bags	ln.	.06 .06½
Turkish, 150 lb bales	lb.	.05 ...
Linden Flowers with leaves, bales	lb.	.15 .16
Without leaves, bales	lb.	.20 .21
Liverwort Leaves, bales	lb.	.14 .15
Lobelia, Herb, bales	lb.	.09 .10
Seed, bags	lb.	.21 .26
Lovage Root, Imp., bags	lb.	.15 .17
Lupulin N. F., tins	lb.	1.35 1.40
Lycopodium, 88 lb. cases	lb.	.35 .36
MACE SIAUW, No. 1, cases	lb.	.34 .35
Banda No. 1, cases	lb.	.41 .42
Batavia No. 2, cases	lb.	.31 .32
Malva Flowers, Blue, bales	lb.	.37 .39
Black, bales	lb.	.25 .40
Leaves, bales	lb.	.12 .13
Manaca Root, bales	lb.	.23 .24
Manna, Large Flake, cases	lb.	.57 .59
Small Flake, cakes	lb.	.37 .45
Sorts, cases	lb.	.45 .50
Mandrake Root, bags	lb.	.08 .09
Marjoram, Herb	lb.	.14½ .15
French, No. 1 bales	lb.	.13 .14
German, bales	lb.	.55 .60
Mastic Gum, 120 lb cans	lb.	.18 .21
Matico Leaves, bales	lb.	.15 .16
Mezereon Bark, bags	lb.	.02½ .03
Millet Seed, Yellow, bags	lb.	.05 .06
Montan Wax, Crude, bags	lb.	.26 .28
Bleached, bags	lb.	.09 .11
Moss, Iceland, bales	lb.	.10 .12
Irish, Bleached, bales	lb.	.75 .80
Mullein Flowers, tins	lb.	.07 .07½
Leaves, bales	lb.	.07 .08
Musk Root, Russian, bags	lb.	.16 .18
Myrrh Gum, 200 lb, cases	lb.	.22 ...
Nutgalls, Chinese, bags	lb.	... Nom.
Aleppy, bags	lb.	.23 ...
Powdered, bags	lb.	.13 .13½
Nutmegs, 110's cases	lb.	.16 .16½
75's & 80's cases	lb.	.18 .19
Grinding, bags	lb	
NUX-VOMICA Buttons, bag	lb.	.05 .06
Powdered, 200 lb bbls	lb.	.08 .09
Oak Bark, bags	lb.	.06 .06¼
Olibanum Gum, 280 lb cases	lb.	.07½ .08½
Siftings	lb.	.24 .25
Tears, No. 1 Extra	lb.	.16 .18
No. 2	lb.	.12 .13
No. 3	lb.	12.00 13.00
Opium Gum, USP, cases	lb.	13.00 14.00
Granular, cans	lb.	13.00 14.00
Powdered, USP, cans	lb.	.25 .30
Orange Flowers, cases	lb.	.08 .09
Peel, Bitter, bags	lb.	.07 .08
Sweet bags	lb.	
ORRIS ROOT, Flor. bid. bags	lb.	.11 .12
Powdered, 200 lb bbls	lb.	.15 .16
Verona, bags	lb.	.09 .09½
Powdered, 200 lb bbls	lb.	.12 .13
Fingers, boxes	lb.	.90 .95
Ozokerite Wax, Brown, Hard	lb.	... ...
Bags	lb.	.24 .25
Green, Hard, bags	lb.	.30 .31
Yellow, Refined, bags	lb.	.37 ...
Papain, Crude, 150 lb cases	lb.	2.15 2.20
Pure, Powdered, 10 lb bot	lb.	2.30 2.35
Paprika, bags	lb.	.20 .20½
Pareira Brava Root, bags	lb.	.13 .14
Passion Flower, bales	lb	.05 .06
Patchouli Leaves, bales	lb.	.15 .16
Pennyroyal, Herb, 100 lb bags	lb.	.07 .08
Leaves, 100 lb bags	lb.	.12 .13

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PEPPERMINT LEAVES, Imp bales....lb.	.30	.40
Domestic, bales....lb.	.24	.28
Pichi Leaves, bags....lb	.10	.11
Pimento Select, bags....lb.	.05½	.06
Pink Root, True, bags....lb.	.32	.34
Pleurisy Root, bags....lb.	.15	.16
Poke Berries, bags....lb.	.14	.15
Root, 200 lb bales....lb.	.06	.06½
Pomegrant Bark of Root, bags ....lb.	.29	.34
Bark of Fruit, bags....lb.	.23	.28
Bark of Tree, bags....lb.	.15	.18
POPPY FLOWERS, Red, bags ....lb.	.40	.42
Prickly Ash Bark....lb.	.12	.15
Southern bags....lb.	.11	.11½
Northern, bags....lb.	.11	.12
Berries, bags....lb.	.20	.21
Prince's Pine, bales....lb.	.15	.20
Psyllium Seed, Black, bags..lb.	.22	.24
Plantago Seed, Blonde, Bags.lb.	.08	.09
Pulsatilla, Herb, bags....lb.	.10	.11
Pumpkin Seed, bags....lb.	.11	.12
Pyrethrum Flowers....lb.	.17	.18
Pwd., pure, 200 lb.bbls..lb.	.20	.21
Quassia Chips, bags....lb.	.06	.06½
Quebracho, bulk, 125 lb. bbl.lb.	.21	.22
Quince Seed, Spanish bags...lb.	1.05	1.30
Persian, bags....lb	1.35	1.80
Rape Seed, South American, bags....lb.	.05¼	.06
Dutch, bags....lb.	.06	.06½
Raspberries, Dried, bbls....lb.	.50	.55
Red Saunders, bags....lb.	.08	...
Rhatany Root, bags....lb.	.10	.11
Rhubarb Root, HD, cases...lb.	.15	.17
Powdered, bbls....lb	.20	.22
Rosemary Leaves, bales....lb.	.05	.05½
Flowers, cases, bales....lb.	.25	.30
Rose Petals, pale....lb.	.15	.15½
Red....lb.	.50	.55
Rue, Herb, bales....lb.	.18	.20
Sabadilla Seed, bags....lb.	.17	.18
Powdered, bbls....lb.	.19	.19½
SAFFRON FLOWERS, American, bales....lb.	.21	.22
Valencia, 1 lb cans....lb.	11.50	12.00
Sage Dalmatian, bales....lb.	.05½	.06
Sandarac Gum, 300 lb bbls..lb.	.30	.35
Sarsaparilla Root, Honduras, bales....lb.	.70	.75
Mexican, bales....lb.	.13	.14
Sassafras Bark, Ordinary, bales	.08	.10
Select, bales....lb.	.16	.17
Savory Leaves, bale....lb.	.06½	.07
Saw Palmetto Berries, bags.lb.	.07½	.08½
Scammony Resin, boxes....lb.	1.30	1.35
Root, bags....lb.	.08½	...
Senega Root, bags....lb.	.36	.38
SENNA ALEX., 150 lb cases lb.	.25	.30
Half leaf 150 lb bales....lb.	.11	.13
Sifting, 400 lb bales...lb.	.10	.11
Tinnevelly, Bold, 350 lb bales ....lb.	.12	.14
Medium Leaf....lb.	.09	.10
Small Leaf....lb.	.07	.09
Pods, 350 lb....lb.	.09½	.10½
Powdered, 200 lb....lb.	...	.10
Serpentaria Root, bags....lb.	.35	.36
Simaruba Bark, bales....lb.	.24	.26
Skullcap Leaves, Eastern, bales ....lb.	.30	.35
Western, bales....lb.	.18	.28
Skunk Cabbage, Natural, bales ....lb.	.12	.14
Snake Root, Canada Natural, bags....lb.	.18	.19
Canada, Stripped, bags...lb.	...	.50
Soap Bark....lb.	.12	.13
Cut, 125-175 lb bags...lb.	.08	.09
Crushed, 200 lb bbls....lb.	.16	...
Powdered, bbls....lb.	.12	.13
Spearmint Leaves, American, bales....lb.	.22	.23
Spermaceti, blocks, cakes, cases ....lb.	.21	.23
Bulk....lb.	.20	.22
Spikenard Root, bags....lb.	.08½	.09
Squaw Vine, bales....lb.	.12	.13
Squills, White....lb.	.05	.06
Powdered, bulk....lb.	.20	.22
Stavesacre Seed, bags....lb.	.12	.13
Stillingia Root, bags....lb.	.07½	.08
Stone Root, bags....lb.	.07	.08
St. Ignatius Beans, bags....lb.	...	Nom.
St. John's Bread, bags....lb.	...	.09
STRAMONIUM LEAVES, bales....lb.	.10	.12
Seed, bags....lb.	.07½	...
Strophanthus Seed, Kombe, bags....lb.	1.80	2.00
Styrax Liquid, Artificial....lb.	.26	.35
Genuine, USP....lb.	.38	.43
Sunflower Seed, bags Calif...lb.	.04½	.05
South American, bags....lb.	.07	.07½
Tamarinds, bbls....lb.	.05	.06
Kegs....keg	3.75	3.85
Tansy, Herb, bales....lb.	.12	.13
Thus Gum, 280 lb bbls....lb.	.07½	.16½
THYME, Spanish, bales....lb.	.08	.08½
French, bales....lb.	.06	.06½
Tonga Root, bundles....lb.	.25	.26
Bark, bundles....lb.	.25	.26
Tonka Beans, Angostura Cases ....lb.	1.50	1.65
Para cases....lb.	.70	.75
Surinam cases....lb.	.75	.80
Tragacanth Gum, No 1, 100 lb. cases....lb.	1.30	1.40
No. 2....lb.	1.20	1.25
No. 3....lb.	1.05	1.15
Powdered, 50 lb boxes....lb.	.80	.90
Turkish cases....lb.	.45	.90
Turmeric Root Madras, bags.lb.	.06½	.07
Aleppy bags....lb.	.05½	.05½
Powdered....lb.	.11	.13
China bags....lb.	.11	.12
Turpentine Venice True, 80 lb cases....lb.	.32	.40
Artificial, 80 lb cases....lb.	.17	.18
Uva Ursi Leaves, bales....lb.	.05	.05½
Valerian Root, Belgium bags ....lb	.09	.10
VANILLA BEANS, Mexican, whole, cases....lb.	3.75	4.25
Cuts, cases....lb.	2.50	2.65
Bourbon, cases....lb.	1.00	1.50
Vetivert Root, 100 lb bags..lb.	.25	...
Violet Flowers, bags....lb.	.80	.85
Wahoo Bark of Root, bags..lb.	.32	.33
Bark of Tree, bags....lb.	.19	.20
White Pine Bark, Roseed, bags ....lb.	.06	.08
White Poplar Bark, bags....lb.	.06	.07½
Wild Cherry Bark, Natural thin, Green....lb.	.06	.07
Rossed bales....lb.	.09	.10
Thick Rossed, bales....lb.	.04	.05
Wild Indigo Root, bags....lb.	.09	.10
Willow Bark, bags....lb.	.05	.05½
White, bags....lb.	.15	...
Witch Hazel Bark, bags....lb.	.05	.06
Leaves, bales....lb.	.06	.07
Wormseed, American, bags..lb.	.05½	.06
Wormwood, Herb, Imp., bales ....lb.	.08	.08½
Yellow Dock Root, bags....lb.	.07	.08
Yerba Mate, bags....lb.	.12	.15
Santa, bags....lb.	.07½	.08½

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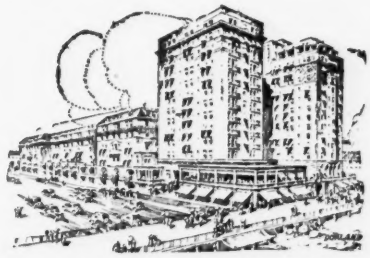

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DRUG MARKETS

French Lavender

(*Continued from page 397*)

the region is looking the situation full in the face, ready to apply itself wholeheartedly to meeting the conditions that have developed during the past few years in the Grasse district.

Movement is on foot in the Grasse region to increase the growing and sale of aromatic plants for the herborist trade. This movement in one or two instances has taken considerable extension, and promises to produce excellent results from various points of view, including the important one of building up a profit-producing business for the small landowner, who used to make an excellent living growing perfume-flower plants and flowers, like the rose and jasmine.

People who have always been in excellent condition financially in Southern France are feeling the pinch of this year's failure on cultures like the jasmine, the loss on which is said to total some 20,000,000 francs, which, with the franc at 4 cents, totals to a large sum in dollars for a district of this kind. In connection with this situation, the payments to the distillers have slowed up decidedly, making it hard for them, in many instances, to meet their contracts with the growers on purchases of flowers and plants.

From all of this it should not be gathered, however, that the Grasse region, is facing ruin. The French are more farseeing than to allow that to happen, but it must be admitted that the situation is serious. Adjustment in keeping with the conditions involved is being made, and there is no doubt but that the entire region affected will see a complete change within the next few years, resulting in a more stable district that can stand a shock of this kind without being hurt very much.

Orange flower trees, as reported last month, are in excellent shape, this culture being probably the best for the region as a whole. Although the prices paid were not high, still they allowed the growers sufficient profit to permit them to take care of their trees in a satisfactory manner.

Clary sage plantations have decreased, with the consequent amelioration on market conditions for the oil. This plant, which grows very quickly for production, suffered overproduction like many of the others, and the result was, of course, disastrous to many of the growers counting upon the continued high prices. An evening out process has placed itself in operation, and there is no great possibility of clary sage oil seeing any decided drops in price. Fluctuations will occur, naturally, but the planting mania is reported over, making it possible for the overproduction problem to become serious.

Permissible Heart Medicines

(*Continued from page 343*)

would not like to see the word used on any preparation for heart conditions.

As to dropsy, the Administration doubts that this is curable by medicines. Hence, the use of the word on labels is not permitted. Heart preparations may not touch dropsy at all, Dr. Cullen says. Dropsy may be due to various diseases, he adds, perhaps of the heart, the kidneys, or the liver. Sometimes cancer will produce a dropsical condition, he says. Therefore, benefit to dropsy should not be claimed for a heart medicine.

In closing the discussion of the labeling of preparations for the heart, Dr. Cullen said:

"Of course, the ban against mention of the heart or of the heart diseases on medicinal labels does not apply to so-called heart burn. This condition has no relation to the heart. It is a condition of sour stomach. The phrase 'heart burn' may occur on the label of antacid preparations, of the proper kind, strength and dosage."

Preparations for the heart have been seized under the direction of the food and drug officials, in a number of cases. One case this year involved the condemnation, forfeiture and destruction of a package medicine having a suggestive name, which bore label claims that it was a heart tonic, would relieve dropsical conditions and was indicated in a number of conditions of the heart and blood vessels. The label on this preparation said it should be used always under the direction of a physician. This preparation, the Department of Agriculture said, consisted of metallic iron, small amounts of extracts of plant drugs, including scoparius and gelsemium.

Pharmaceutical preparations, such as tincture digitalis, strychnine tablets, nitroglycerine, and various other preparations regarded as applicable to heart conditions, have been seized by government agents and condemned in other cases, because they failed to come up to the standard strength. Being labeled as of such strength and the quantity of drug per tablet being stated on the label in some cases, they were held to be both adulterated and misbranded. In the case of one firm, involving several preparations, there was a plea of guilty entered and a fine of $500 assessed. In another of these cases, also involving several preparations, the plea was nolo contendere, but the fine was $1000.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912

Of Drug Markets, published monthly at Pittsfield, Mass., for October 1, 1931.

State of New York, County of New York—ss.

Before me, a notary public in and for the State and county aforesaid, personally appeared Thomas R. Farrell, who, having been duly sworn according to law, deposes and says that he is the Editor of the Drug Markets, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Drug Markets, Inc., 101 West 31 St., New York, N. Y.; Editor, Thomas R. Farrell, 101 West 31 St., New York, N. Y.; Managing Editor, none; Business Manager, Frazer V. Sinclair, 101 West 31 St. New York, N. Y

2. That the owner is: (If the publication is owned by an individual his name and address, or if owned by more than one individual the name and address of each, should be given below; if the publication is owned by a corporation the name of the corporation and the names and addresses of the stockholders owning or holding one per cent. or more of the total amount of stock should be given.) Drug Markets, Inc., Frazer V. Sinclair, Thomas R. Farrell.

3. That the known bondholders, mortgagees, and other security holders owning or holding one per cent. or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

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5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is (This information is required from daily publications only.)

Thomas R. Farrell, Editor.

Sworn and subscribed before me this 1st day of October, 1931, Joseph Cass, Notary Public, Bronx County, Clerk's No. 22, New York County Clerk's No. 281. Commission expires March 30, 1933.

(Seal)

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